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Saving Seed Corn.

Having made some simple yet very conclusive experiments, at least to my own mind, in saving corn for seed, and as this is now the season for saving it, I give these experiments so that others may try the plan also.

I would state that my usual way has been to cut off the corn from the ground and seed the land in wheat, and to husk out the corn at our leisure during the fall, saving the best filled and largest ears of corn whilst husking for seed, and storing it in a cool, airy corn-crib until the proper time came for planting it. But I noticed that oftentimes that corn planted the same day, in the same soil, and apparently from the same seed, came up very irregularly: one row, or maybe a dozen rows, coming up nicely, and then one or two rows or parts of rows would be missing. I could not account for it at first; but at last it dawned upon my mind that the ears of corn taken from the outside of the shock where the air and sun light had free play, ripened perfectly and produced germs of corn that had all their vitality to reproduce their exact species of corn, whilst the ears

hidden away in the shock, kept from the air and the bright rays of the sun, although their grains seemed sound and perfect, yet the germ was weakened, and although when planted when everything was favorable, such as soil and warmth, would oftentimes come up and grow nearly as well as the first, yet if the least cold, wet weather, or if the ground should become too dry after planting, much of it would be missing, or if it did come up it would be sickly and yellow and produce but a poor crop, the vitality being wanting. I do not say that this is the case every year, for it is not, but it oftentimes is, notably so last year and this.

Last fall to convince myself, I saved corn for seed in three distinct ways, viz:

1st. Corn topped and the ears allowed to hang on the stalks until the ear was thoroughly dry, then pulled and hung up by the husks in the corn-crib where the air could pass through. This corn was shelled by hand, the nibs and butts rejected, and planted five grains to the hill in a rich clay loam on May the 11th. It came up in a few days and at the second working it was thinned to two stalks to the hill, and is at this date, September 24, ready to be topped, being quite dry. Of the 450 hills tested, 20 hills missed, 5 hills being covered with sods and 3 with stones, so that this could not come through, so I say that only 12 hills failed to germinate. Remember, May of last year was a very unfavorable month for germination of any seed, some farmers replanting their entire planting.

2d. Corn taken from outside of the shock and the same care taken of it, planted in the same soil, etc., as the first. Of the 450 hills tested, 28 hills missed, of which 16 hills missed through sods and stones. So we have 12 hills failed to grow, the same as the first lot.

3d. Corn taken from the inside of shock where neither the air or sun could get to it

directly, and taken from the shock the same day as Nos. 1 and 2. This had the same soil and treatment as Nos. 1 and 2. Of the 450 hills tested, 123 hills failed to come up; 19 hills failed owing to sods and stones; so we have 104 hills through defective germination which failed to grow.

More care should have been taken in these experiments so that the soil should have been free from all stones and lumps, but I could not avoid it; but for all practical purposes it will do.

These rough experiments then show conclusively that corn for seed should be topped and allowed to dry thoroughly and kept free from all dampness, and very little replanting need be expected. F. SANDERSON.

Plains Farm.

Preparing for Wheat—System on the Farm.

Messrs. Editors American Farmer:

After an experience of some forty years on the line of farming, and with a constitution and good health that fitted us for the work, a will-power that led us to take hold of anything that ought to be done, and with

advantages we ought at least to have some experience in getting products out of the earth, and with your permission we will give some thoughts to insert in your valuable journal. Now is the season for seed-sowing preparatory to the harvest of another year, and now is the time of the year in which the farmer is over-crowded with work, so much so, as it is often said, he hardly knows what to do first. But ah! what a secret that is to know and understand good economy, united with industry, and then with a system and a proper balance-power, so that all the machinery shall be found in its place, and when you want it to know where to find it. We know it will require line upon line, but we think we can approach toward it at least, and in doing so we will save the labor of at least one hand. We reared four sons in that direction and succeeded well in cultivating the soil of the earth, and though started at the foot of the hill and reared up a full-grown family, with the comforts of life—bread and meat and enough to eat and to wear, and no implement we needed to carry on farming that we had not at command—and for thirty years we lost but one horse, with six or seven on hand, and bought but one in that time, as we raised all our stock, and as regularly as the night came, when man must take his rest, so must the beast of the field, and the result was, with the regularity and system, each was prepared to do the share of work allotted them. And to-day this same man lives by the blessings of a kind Providence, and though sixty-six years of age, he feels his strength renewed, like the eagle's, every member of his full-grown family being stout, hearty and strong, and so remarkable has been their health that death has not invaded it for forty-two years, and though now taking a respite from the toils of life, the faculties are all as bright and clear as fifty years ago, and the memory as good in the farming department as to how it

should be done, as ever it was. I think it a high and noble calling, and the Book tells us that the king himself is to be served by the field; and when the product of the earth ceases all other business fails, for in the sweat of thy face shalt thou eat bread all the days of thy life. While the earth remaineth, there is to be a seed time and a harvest as well as cold and heat and summer and winter.

Well, Mr. Editor, we started out with some thoughts in regard to the work of the season, and the multiplicity of it that is now upon the hands of the farmer. The fine rains have favored him in plowing for the wheat crop, which should be done as early as possible. How much better is the chance for a wheat crop by letting the ground lie for some time after plowing and the soil rot well and pulverize, and to gather up and haul out all the compost about the premises, which will pay well for time and labor; clean off the stones and stumps so that it may be well put in without any obstruction. We always found that a neat, careful way of farming paid the best. Five acres well improved and cultivated is better than thirty or forty in a don't-care-how way. We have

thirty acres with 5 or 8 bushels per acre. It is rather astonishing to find to what a state of perfection for production you may bring a piece of land; you can hardly make it produce so much that by a better cultivation it will not yield a greater crop still. We are glad to live and be able to go back on the fifty years ago and bring it up in our memory and lay it beside the present improvements in farming. We well remember the first threshing machine that came up to our father's barn to thresh out his grain that drew the neighbors together to look at it. He was one of the largest farmers of Harford county, and previous to this the flail thumped in the barn nearly all the winter, and he thought he had done some business if a hand thumped out a four-horse load of wheat in nearly two weeks. Now steam power will furnish you that in an hour, and then we had not an implement fit to work with. Well, it is no trouble to me to get out of the old ruts; I am glad we live in an improved age; may we still continue to grow wiser and better. L. M. GORSUCH.

September 18, 1883.

Technical Education.

The following article clipped from the *American Grange Bulletin*, of Cincinnati, coupled with the meeting held in Baltimore some time ago looking to the establishment of a Technical School there, seem to evince signs of progress in the right direction. Lawrence Scientific School of Boston, the Sheffield Scientific School of Connecticut, and the Green Scientific School of Princeton are further evidence of the growing conviction that something more is demanded than an acquaintance with Homer and Virgil, or a smattering of the differential and integral calculus.

It has been a mooted question for years past whether a collegiate education, almost wholly confined to the study of the languages and the higher mathematics which have little if any practical application to the or-

dinary business pursuits of the day through which men live, support themselves, acquire a competency, and oftentimes a fortune, may not be wisely abandoned for other English studies giving quite as thorough a mental training, and yet giving a thorough business education which would fit the student for the every day affairs of life.

This tendency is illustrated by the introduction of more *elective studies* into the curriculum of our higher colleges, such as Harvard, Yale and Princeton; but these do not place the student upon a different footing, only reach higher. Even the Johns Hopkins University, an institution confessedly aiming at a higher grade of scholarship than is usually found in our best colleges, does not seem to aim beyond making more finished scholars, and, indirectly, to widen the investigations of its students in some few of the learned professions, for instance that of medicine, as evidenced in its chemical, botanical and biological course.

Purdue University, of Indiana, has discarded Latin and Greek from her collegiate course, but what will be substituted for them the papers do not state.

When Astor, Vanderbilt, Jay Gould and Bennett took their sons in their offices to instruct them practically in their respective business, it seems time to see if other men cannot do the same.

Of all men, farmers need the most *technical education*, and of this we shall speak in a future paper. A. E. A.

Russum, Md., August 29.

"The English Government is at present giving considerable attention to the subject of technical education. To put the matter briefly, England is endeavoring to ascertain how to impart the greatest amount of information that will be of practical use to a man in life, in a given length of time. What is known as a royal commission has been traveling on the continent under instructions from the educational department, seeing what other countries are doing in this line, and William Mather, of Manchester, England, is now in America on the same errand.

Thinking people of this country are rapidly reaching the conclusion that our educational system is very defective in that it resembles more a sort of general cramming operation than a careful preparation of a child for the practical affairs of life. An unexpected call upon a friend a short time ago, disclosed him in a disturbed state of mind. An explanation revealed the fact that he, an excellent mathematician by the way, had been cudgelling his brains all the evening in assisting his fourteen-year old daughter to work out her algebra lesson. They both had failed, and as a consequence, the father had lost his patience and the daughter was in tears because she would be marked down next day on account of not having her lesson. Now, what on earth is the sense of making a girl's life miserable by compelling her to master the perplexities of algebra? How many girls out of a thousand ever have occasion to think of algebra after they are through with school? But it is excellent discipline for the mind, say our wise men. True, but can't the same degree of discipline be secured by something that will be of use in after life? In discussing this subject recently, with a friend, who is a graduate of one of our best New England colleges, he said: "I spent my boyhood in preparing for college; I spent four years in college and worked hard; I studied the higher mathe-

matics, Greek, Latin and all that is taught in a first class college, and when I graduated after about eight years of hard study I was fitted for absolutely nothing. When I went out into the world and began life in earnest I had to go through another course of preparation for the practical affairs of men.

Is not there a great deal of point to this. A finished education, is, of course, a magnificent thing to have. But with men who have to struggle for a livelihood and have to become active participants in the world of affairs how many can afford to spend the time requisite to acquire a finished education, and afterwards prepare themselves for business? In other words would it not be better to have some specific object in view in the education of children, and give them as much technical knowledge as possible in that particular line? The British Government seems to have reached this conclusion, and is taking steps to impart more technical knowledge, particularly to those who can spend only a limited period in study. Mr. Mather says that England has found by experience that it is necessary to make the education of the future more scientific and technical, so that the working classes may have some sound, if only elementary, knowledge of the physical laws which underlie the industries and manufactures upon which they are engaged."

Public Roads.

The Deer Creek Farmers' Club held its September meeting at the residence of Mr. John Moores, near Bel Air.

Mesara. Archer, Rogers and Munnikhuyzen, the committee appointed to inspect the farm and buildings, were accompanied around the premises by the entire club. Upon reassembling at the house, Mr. Rogers, of the committee, said that they had seen nothing to find fault with. Mr. Moores' cattle were not of a fancy kind, but not many cattle in the county had improved more rapidly in growth and flesh. His Essex hogs are equal to anybody's. He also has some very nice sheep. His fences compare in cleanliness with those of any farmer in the county. Mr. Archer criticized Mr. Moores' plan of building straw stacks, saying they were too broad. Mr. Moores differed in opinion, saying that in winter when the cattle eat away the sides they make for themselves. At the same time, a shelter from storm. Mr. Archer said Mr. Moores' farm had improved as much as any one else's and he now raised as much on one-half his farm as he formerly raised on the whole tract. Mr. Munnikhuyzen also spoke of the excellent manner in which Mr. Moores' farm is managed. He was struck with the gentleness of Mr. Moores' sheep. They have been taught not to run at the approach of dogs, which afforded some measure of security, as the canines are not so likely to attack a flock that does not flee from them.

Public roads were under discussion and we are obliged for our report to the *Argis*.

Mr. Moores said he had been over a great many of our county roads and found them in most excellent condition. The present road system is a good one, but a little more public spirit and enterprise are needed. He recollected when some of the roads abounded in quicksands, and much money was spent in filling them with stone. The quicksands have disappeared, the earth has washed away from the stone piles and they are left to mark the spots where quicksands stood. This plan has been kept up for 30 years. He thought drains on the sides of the roads would have prevented the necessity for the stone piles which now mar the roads. The next step in road mending was throwing up the middle of the road and making ditches at the sides. About as much of this has been done as is necessary. Most of the roads now only need smoothing up and keeping the drains open from time to time. Men should be kept constantly on the roads for this purpose. He was glad to see that the roads had been taken out of politics. He remembered that when the Whigs got into power all the Democratic road supervisors were turned

out, and when the Democrats came in the Whigs had to go. Now Republicans as well as Democrats are appointed to mend the roads. This is a good thing. The roads should be in the hands of persons most interested in them. He approved of appointing General Road Supervisors, as the Commissioners have not time to attend to roads. It might be advisable to let each district spend its own road money, but he feared the change might be attended with increased expense, since it would increase the number of offices.

Judge Watters said that the public roads are public property and any improvement to them is an improvement to all the property in the county. Our roads are improving and are better than ever before. It is possible, however, to make them much better. He was opposed to changing the system, and it is an admirable thing that the roads have been taken out of politics. Some money is, of course, injudiciously spent, for want of care and judgment, but the general result is good. He advocated the use of patent road scrapers, worked with horses, like the one Mr. Thomas C. Hays has. Such a machine can be used with good advantage on many roads. He opposed the use of dump scrapers. He thought no one should criticize the condition of the roads unless he had himself done something to improve them. Instead of fault finding, if each person would do something to benefit the roads near him the good results would be great. Road warrants should not be regarded as merely an easy way to pay taxes, but public spirit should induce a man to do the best he could with his allowance. The Deer Creek Farmers' Club, he thought, had done much, in that way, to improve the roads. Every step in the way of improvement makes the next step easier.

John B. Wyong said it was important to keep the roads clear of loose stones and ditches open. The supervisors, in mending their roads in the spring, should keep back part of their allowance, to be used for this purpose later in the season. He also thought the steep hills should be graded down. As a general thing the roads are mended too late in the season.

Thos. Lechary thought that to have good roads we must have good supervisors, men who will take an interest in them. It makes no difference how much money is spent on the roads, if it is spent judiciously. A good supervisor should be given as many roads as he will work.

Robert W. Holland said the loose stones should be picked up at least twice during the year. Farmers along the roads should assist in having them mended, by giving a little hauling to the county. It will help them and help the county. The present road system is as good as any. The roads are mended early enough, but the supervisors should keep back part of the money to mend the roads later in the season.

R. John Rogers also regarded the present system as good enough if properly enforced. He knew an important piece of road that has not been touched this season, and being washed it will be bad all next winter. He had been in favor of the contract system but had never seen it tried. Mending most of the roads with a shovel is a slow business, from the difficulty of throwing earth from the sides to the middle. Fifty per cent. could be saved by using a patent road-scraper (Pennock's) like Mr. Hays'. If a man has one of these scrapers and is willing to use it he should have all the roads he will take. They cannot be used on all roads. He thought the dump scraper the next best thing. He was opposed to depositing too much earth in the roads, but they should be raised sufficiently to carry off the water. When that is done and the water courses kept open the roads will seldom wash. Breaks are generally dispensed with. Slight breaches in the roads should be mended as soon as

they occur, when it can be done at less expense than afterwards.

B. H. Barnes said it is most important to keep the drains open and loose stones removed. The stony knobs placed in quicksands years ago should be broken up and removed and not covered with earth. There are too many breaks and not enough culverts on the roads.

James Lee admitted that the roads had greatly improved in the last 10 years, but they are not as perfect as they might be. He thought road mending is a business and they should not be mended only to pay taxes. A better plan would be to sell the roads out in short pieces to the lowest bidder. A person is more likely to keep the roads near his own place in good order and can do it at less cost than one from a distance. A considerable amount of money is wasted on our roads.

R. Harris Archer said that no one would object to paying higher taxes to put the roads in better condition. More money ought to be appropriated for the roads if it is properly spent. He could suggest no improvement on the system. If the county would employ a good road-mender, with five or six men, a yoke of oxen, cart and scraper, he could be advantageously employed on the roads every day in the year. The patent scraper would be advisable where it could be used. The loose stones should be removed. In the Deer Creek region many large stones are left sticking up, which the supervisors annually cover up with earth. This is of no use, they should be removed. It is impossible to keep roads in good order all the year where heavy teams travel them constantly. Supervisors in such localities are subjected to much undeserved blame. He was opposed to creating a county debt to turnpike roads, a project that has heretofore been entertained by some.

Wm. Munnikhuyzen thought the public roads are improving nearly in the same proportion with everything else in the county. They are much better than they were twenty-five years ago, while there is vastly more heavy hauling on them now than then. He did not think any improvement could be made on the present system. It is a good plan to give as many roads to competent supervisors as they will work. He objected to horse-power scrapers, believing that they pulled too much earth into the roads. The roads need not be rounded up much, because when cut into ruts the water lays in the ruts, and they grow deeper. He did not object to hills washing down. It is folly to keep working a hill to keep it in its original shape. All that should be done to it is to keep it in travelling condition and let the water wash it down, if it will. Loose stones should be picked up, hauled to the bottom of the hills and broken up. They will soon catch the sand and earth that washes down and be covered up. He thought quicksands could be removed by culverts across the roads better than by deep side drains. A few days ago heard a man growling about the roads and waste of time and waste of money, and at the same time he was cutting down bushes and throwing them into the water-course.

John Moores advocated the appointment of an inspector of bridge timber and bridges. He knew of a bridge that contains two or three bad pieces of wood, which will make it necessary to take the bridge down many years before the rest of the wood is decayed.

Thos. A. Hays said the three and most important points in securing good roads are—the man, the time of mending and the mode. Different roads need different treatment. He advocated the use of the horse scraper. At first it may be necessary to pile the earth on the road but in few years a permanent improvement is seen. Level roads require good drains but hilly roads make drains for themselves. Roads must be well drained, and level roads require culverts to do this. Our

road system is good enough but not carried out as it should be. The roads should be mended at certain seasons and then let alone so that the earth may settle and become hard. If mended too late we are certain to have bad roads in winter. Roads must be kept high in the middle and have drains on each side. He spoke of the condition of the road from Mr. Rogers' gate to Bel Air, which he says has a drain on each side and one also in the middle. Where stones are plentiful turnpiking makes the most permanent roads.

Geo. E. Silver said the roads are improving, but the demand for better roads has also increased. It is more difficult to mend the roads to stand the travel of to-day than it was years ago. It is impossible to put clay roads in condition to remain good all winter. The most necessary point in road mending is to secure good drainage, since a road will be more easily kept in good condition if water is not allowed to stand on it. The roads should be widened each year, as they are repaired, then wide deep drains can be made. Culverts and breaks are necessary. No matter how good any system may be, unless followed closely we cannot have good roads. Farmers living along a road can mend it cheaper than others, and every farmer can do good to the roads by keeping his fence rows clean and his trees trimmed up so that the sun can reach the road. Bushes, &c., should not be allowed to fall into the water courses. He thought it would be advisable to employ an expert to examine bridge timber and see that bridges are properly constructed.

Judge Watters further said that the plan of road mending must vary with the ground. Some roads can be thrown up to advantage. On others when the top soil is broken quicksands appear. There are places where it is better to have no water course, others where the drain should be on the lower side and none on the upper. If there is no outlet for water there should be no water course.

[Will some of Harford county readers give us a statement of what system is now operative there.—Ed.]

Agricultural Experiment Stations.

Within the past eight years there have been founded in several States institutions which, though they have not yet attracted much attention from the general public, can hardly fail to exert, in the near future, an important influence both on the material and mental welfare of the people. These institutions are the agricultural experiment stations, of which six now exist in this country, with a prospect of the speedy establishment of at least two more.

By an agricultural experiment station is understood an institution established and maintained "for the purpose of promoting agriculture by scientific investigation and experiments." Such institutions have, in most cases, owed their existence to governmental action, and have been sustained at the public expense, though in a few instances universities and private individuals have carried on what are in effect experiment stations, the most notable example of the latter being the well known Rothamsted experiments of Messrs. Lawes and Gilbert, in England.

Although experiment stations are still somewhat of a novelty in this country, they are far from being so in others. There is scarcely a country in Europe where one or more is not in operation, while in the German Empire they number not less than fifty. The first to be established was that at Rothamsted, just alluded to, in 1843. This has continued to the present time, though not under the name of an experiment station. Nine years later, the station at Mockern, in Saxony, which had been carried on for some two years by private and corporate generosity, received a grant of money from the State,

and became the first public station. In 1853 a station was founded at Chemnitz; in 1855 one at Gross-Knechtlin, and, for the succeeding twenty-two years, 1860 was the only year which did not witness the institution of at least one station. Other European nations followed the example of the German States, and stations were established by France in 1856, by Austria in 1857, by Holland in 1857, by Sweden in 1861, by Russia in 1864, by Italy in 1870, by Denmark in 1871, by Belgium in 1872, by Switzerland in 1872, by Austro-Hungary in 1873, by Scotland in 1875, by Spain in 1876. The value of the scientific work done by these stations during the last thirty years and the impetus it has given to rational agriculture are very great.—H. P. Armsby, in *Popular Science Monthly*.

How to Make Sandy Lands Productive and Remunerative.

The Texas Farmer says:—How to improve light sandy lands and render them productive and remunerative with the least expense and labor, and at the same time bring them into this condition as soon as possible, has long been a leading problem. To render such soils highly fertile is a work requiring time and patience, but it is being done. Lands that were naturally exceedingly barren and worthless in their natural condition under intelligent and judicious management, become rich and valuable. The amelioration of such soils, it hardly need be said, consists in supplying them with constituents necessary to plant growth which they lack in greater or less degree, and in constantly improving. To supply such constituents in the form of manures of various kinds at the outset is impracticable in almost any case by reason of the expense and labor required; but this course is not necessary. Nature is ever ready to afford assistance and generously second man's efforts in this behalf, if he will adopt proper means to reach the desired end. She has provided plants that are specially adapted to such soils. The clovers are among such plants. The cow-pea is especially adapted to such soils, and there are others we need not stop to name, which seize upon the slight nourishment afforded and by their habits of growth shade the soil, extract valuable and necessary material for their own subsistence both from the earth and the atmosphere, and work as vigorously as possible to recuperate the productive capacity of the soil in which they live. Such crops in time fill the soil with a mass of fibrous roots, cover the surface with foliage, if there is a possibility of doing so, thus shading the ground and preventing the evaporation of such moisture from the earth, and extract valuable fertilizing matter from the atmosphere which contributes largely to supply fertility. The value of turning under such crops is well known and need not be enlarged upon. These, with the use of such suitable manures and fertilizers as can be readily supplied, supplemented with a proper rotation of crops, and the keeping of live stock, will in time bring unproductive, light soils into a good degree of fertility.

How a Pasture is Made.

In Great Britain, Holland, and in some of the best districts in this country, land is selected for a pasture as it is for any particular crop. Regard is paid to its adaptability to produce a large amount of fine rich grasses. The soil of sod is prepared to receive the seed, which is selected with special reference to the production of grass to be eaten while it is in its green state. Great pains are taken to render the soil as productive as possible. Water is supplied or drained off as the wants of the land require. Weeds and bushes are exterminated or kept in subjection. Fertilizers are applied as they are to land devoted to cultivated crops. Loose soils are rendered more compact by

the use of the roller, and very heavy soils are loosened by the employment of the harrow or scarifier. Most farmers in this country, however, neglect all these things. Land is not selected for a pasture. If it is too rocky, broken, or difficult to cultivate; if it is too wet or dry to produce good crops of corn, grain, potatoes or roots, it is devoted to pasturage. Land is selected for other purposes, but the land for pasturage is what was rejected as unsuited for any other use. Sometimes a piece of land originally productive is devoted to pasture purposes. If this is the case it is generally after it "has been cropped to death." It is first planted to corn for several years, then sown to grain for a period equally long, and then laid down to grass suited for mowing purposes. After the crop of grass becomes so light that it scarcely pays for the work of cutting, the farmer concludes that the only thing he can do with the land is to devote it to supporting stock during the summer, when he expects to make the most out of them. There are no evidences of beneficent design in most of the pastures in this country. They are the work of chance or neglect.

Eight Acres Enough.

When I acquired title to the old homestead and the great barns of the hundred-acre farm, now whittled down to eight, doubts appeared as to the ability of succeeding on a small surface, where a former proprietor had acquired a much larger area. Beginning with a retail route to a neighboring city, I commenced to sell vegetables; and supplied a steady and growing demand for "fresh goods right from the garden." This finally took the form of fancy gardening, in my determination each year to add to my list of products such new varieties of vegetables as the popular taste demanded, and which were unsupplied in the home market. This necessitated learning a great deal in experiments, both by success and failure in raising the articles called for; but as the articles raised were new, and I held all the supply, my trade grew apace.

Some things were dropped from the list as unprofitable, by reason of the very limited demand; for I have found that if a market can be created any vegetable can be sold at a remunerative price. I determined on uniform and medium prices, which would insure confidence in the customers, and deter competition while it ensured a safe and steady market for my products. My greatest trouble was in lack of ready money to buy what I imperatively needed in the prosecution of such a form of gardening; these were sashes for hot beds, and a place to store in a half-growing condition such crops as I wished to market in a fresh state, such as cauliflower, lettuce, endive, parsley, leeks, celery, etc., but time has at last overcome those difficulties and I have now, after twenty years of labor, secured a business in my nearest city four miles away, which has so far distanced all competition.

Now, what is the moral? Simply this, that where the right conditions exist a man can support a family of six persons and sometimes more on eight acres, and do it year after year. Besides I keep three and sometimes five cows, and always one horse; all this on eight acres. The land grows richer, the buildings are in as good repair as at first; and the working force, besides myself, is equal to one man eight months, and one boy twelve months. I have lately added a hot-house; have fifty pear trees and twenty-five grapevines in bearing, with a fine young orchard coming on; all fruit I have set with my own hands. I thought at first eight acres was too small, but I now find it land enough: I have had to work hard, too hard some of the time, but I have found leisure to read, enjoy life and keep up with the times.—W. H. Bull, in *N. Y. Tribune*.

Harvesting and Saving the Turnip Crop.

There are several ways of harvesting turnips—we do not mean ruta-bagas—but we do not think the old-fashioned way of pulling them up by hand, and topping them with a knife, has been improved on. An active man or boy can get through with a great deal of work in a day—especially as this crop is seldom a very extensive one, rarely going beyond two acres, and seldom more than an acre, hence the labor at most lasts only a day or two. A late mode of harrowing them out may be quicker, but no turnips thus mangled would sell in market—they would be fit only to feed to such animals as would eat them.

It should be borne in mind that of all the roots the turnip is the most impatient of heat. It starts to grow on the slightest provocation. In a cellar of not over forty degrees, one may find it growing freely, after an incarceration of but a few weeks. It is growth which is the great enemy of preservation, and it is heat which excites growth. There is a natural heat in roots when put in a heap—a little heat from one root and a little more from another soon makes a pretty high degree; but in the open field this is carried off by the open air about the pile. Hence, under cover of close protecting, this natural heat is not carried off. It accumulates, the roots sprout, and thus give off more heat, and it all soon becomes a regular turnip-stew. The turnip, indeed, does not mind a little frost. If they were put in small lots in stalls, where the frost could get at them, and covered with straw to prevent rapid thawing they would keep better than if covered with earth, which rather serves, as we have seen to collect the heat and *boil the roots*.

As to how best to keep turnips, that will of course depend on each person's conveniences. But if each one keeps in view the fact that heat is more likely to injure them than cold—and a very low degree at that—he will readily find out when he looks about what is the best way for him to preserve them. This is about all there is practically to say about the harvesting and storing of this crop.—*Germantown Telegraph*.

Farming in North Carolina.

The States of Maryland, Virginia and West Virginia, as well as North Carolina and Georgia, offer inducements to settlers, either from abroad or the over-stocked States to the East and North of us, far superior than can be found in the West and Northwest, for men of small means, but of industrious habits. Many men in our Middle States years ago made investments at the West, intending the land purchases as future homes for their families, or calculating on an advance in their price which would bring large profits. These expectations were realized only in cases where settlements were actually made, and to our knowledge and experience, the heirs of such landed properties, after their parents had departed hence, found that the taxes paid on them, except in peculiar locations, had over and over again eaten up the original cost, and when sold, they realized but a little over the amount paid for them.

Our object, however, was not to deny the advantages of the West, but show that greater facilities for our enterprising young men are to be found nearer home, and as a notable instance thereof, we find in the Raleigh (N. C.) *News and Observer* the following statement. In giving an account of a Wheat and Cattle Fair, just held, it says:

"It was interesting in the cool of the early morning to notice the gathering of the clans—the long lines of visitors attracted by the second cattle and wheat fair of Forsyth. They poured in as a continuous stream; nor did they leave behind them the fairer and better part of humanity—the ladies. Indeed, it seemed as if all of the people were coming. And they were a fine looking people, too—

with ruddy complexions, bright eyes, strong limbs, no less healthy than intelligent in appearance. And they seemed well-to-do withal. One could discern many signs of prosperity as they passed, but particularly were we struck by the fact that their horses were the best stock we had ever seen. It was a matter of general remark by the strangers present. Why this was so may appear from an incident. During the day there were sales of tobacco at the following warehouses: T. J. Brown & Co., Norfolk's Piedmont, Pace's and Hannah's. We attended those at the first two and saw tobacco sold at the Piedmont at \$1.28 per pound, and at Brown's at \$1.25. The latter was particularly noteworthy. Four years ago Mr. Whitaker, hardly more than a youth, bought fifty-seven acres of land in Surry county for \$125. His first crop of tobacco sold for \$1,400; his next, \$1,300; of last year's there were sold that day 2,834 pounds for \$2,166; and he has 1,300 pounds still at home, besides his corn and wheat, &c., &c. His crop has in these three years paid for his farm more than forty times. No wonder these people have good horses."

Live Stock.

The Sheep.

The Hon. Cassius M. Clay, a well-known Kentucky breeder, gives the *Rural New Yorker* the following chapter on sheep:

"The sheep (*Ovis*) has been domesticated from the earliest times known to history. It is found on prehistoric monuments, and was mingled in the personal representation of Jupiter and Osiris, and other gods. The goat is near enough in structure to be classified by some naturalist, as in the same genus as the sheep. It, however, does not breed with the sheep, whose many marked varieties may suitably constitute a genus of themselves. The five prominent species are: *Ovis Musiman*, *O. Ammon*, *O. Tragelaphus*, *O. Montana*, and *O. Aries*, or domestic sheep. Of the *O. Aries* there is a vast number of varieties, but the best are thought to have been from England's large commerce, concentrated in the three kingdoms of Great Britain. Of these the three favorite breeds are now the Merino, the Cotswold and the South Down.

"The wild sheep is provided with horns in both sexes; but, being of no longer use in domestication, they have gradually disappeared, except in the Merino and lower breeds. The sheep seems to flourish best in temperate climes, but is found in almost all latitudes. In the least cultured state their skins are covered with hair or wool mixed with long hair protruding through the wool; and the legs of all the genus are covered with hair; so are mostly the faces and bellies. These parts being mostly exposed to abrasion in movement would not be so well able to maintain wool, which from its structure, is easily torn off. We may lay it down as a fact that culture diminishes the horns and the hair, as there seems to be a law of nature that the things not needed to animal security are gradually lost. And in my own experience of nearly a third of a century the wool has increased on the foreheads, the legs and bellies of my sheep.

"The sheep is a ruminant with double stomach and enlargement of the upper intestines so as to appear to have more stomachs. The intestines are the longest of any known domestic animal; they are about 28 times as long as the whole body, hence sheep produce more flesh for the food consumed than any other animal. They have eight large teeth at maturity on the front of the lower jaw; none in the upper; and twelve molars on each jaw. This structure of the sheep enables them to eat very short grass; pressing it between the lower teeth even in the ground and gristled bone of the upper jaw; while the cow thrusts out the tongue on alternate sides and gathers in the grass; and the horse nipping it with both upper and lower jaw fronts cuts not so closely as the sheep.

"As a general rule, animals live five times as long as the period of maturity, that is to say, if sheep mature in two years, they should live ten years, but they go much above that. So man ought to live by the rule to a hundred years; and he will when the laws of nature shall be better observed from generation to generation. The first year the sheep has eight small teeth, which at the end of that time show two large teeth in the center, replacing two small ones; and so on, losing two small and gaining two large teeth until the mouth is full, with eight teeth at four years and upwards, for I find that these results are only approximate. After a few years the teeth begin to wear away, and are finally lost, when the sheep, unless fed upon pulverized feed, must die. When sheep are bred simply for mutton at so much per pound, the old sheep should be culled and fattened for the butcher. But with sheep having fancy prices if they have a lamb and die, they thus bring more than when fattened that year and sold to the butcher."

Fall Management of Pigs.

September is generally a month of short pasturage, and grazing pigs are not likely to make any gain, if even to hold their own, without extra food is given. The grass is hardly sufficient as food of support, but unless the pig gains in weight the food of support is virtually wasted—even worse than wasted—since the pig when not thriving is taking on an unthrifty habit. There is no animal more sensitive to neglect than the pig, or one that pays better for full rations. September is a little cooler, and pigs may be pushed a little more than in July and August. Perhaps the best gain made by the six months pig may be made in September, as the temperature is extremely favorable to health and full rations. This is the first month also to begin feeding the new crop of corn to pigs. Those who favor cooking corn for pigs must, on principle, favor feeding it as it gets out of the milk. Cooking is done to dissolve the starch of the corn, and thus render it more digestible, but the new ear, in the thickening milk stage, is as near in solution, and in an easily digestible state as cooking can make it. Nature, then, furnishes the grain in the best condition for immediate use by the animal stomach. An acre of corn will then put more live weight upon pigs than at any other period in their growth. If the ears are picked and given to pigs, they will eat cob and all, as it is tender, and they relish it. For cattle the corn is much improved by running the stalks and ears through a cutter, reducing it all into very fine soft chaff, and it will all be eaten clean. But the pigs cannot eat so much rough fodder, and the ears are sufficient for them. If old corn is fed to pigs in this month, it should be fed with wheat bran or middlings, and with a little oil meal once a day. This will keep the stomach and intestines in a healthy condition. When pigs are eating vigorously and making a rapid gain, it is a great point to be able to prevent the heating effects of old corn. There will be no trouble with the ear in the thick milk, as the eating of the cob and part of the husk will give so much coarse food with it as to prevent its heating effects. We have known 500 pounds of live pork to be made from one acre of such corn in milk. Bran and middlings, in most parts of the West, bear so low a price, that they cost, often, less than corn, and therefore can be fed as part of the ration, with old corn, very economically.

We should like to see our farmers using more of the large surplus of oil cake, both of linseed and cotton seed, in feeding both pigs and cattle. It is much better economy in us to export pork, hog, and cattle products than the food to grow them. The paltry sum of six millions which these oil cakes bring would be more than doubled by

exporting the product in meats; besides the cost of freight on product in meat would be only about one-fifth of that on the raw material of food.

Let us consider, for illustration, the difference between full feeding in September, on grass, and letting the pigs depend wholly upon scanty pasturage. We will suppose that the grass just furnishes the food of support without any gain. The food of support represents three-fifths of a full ration for pigs. By adding two-thirds as much more the pigs will gain, say 1½ pounds each per day. This would give 37½ pounds during September for each pig. Let us suppose that it would take 5 pounds of grain to each pound gain for a full ration; in that case 2 pounds will produce the gain after the food of support; so that 75 pounds of grain will produce 37½ pounds of gain in September on grass. Now, if this gain is to be made at another time, and wholly on the ration fed, it would take 5 pounds to the pound gain, or 187½ pounds of grain to make the same gain; or 112½ pounds of grain loss on each pig—that is, the pasture represents that amount of grain to each pig—but there being only the food of support, it is all lost for the want of 2 pounds of additional food to produce the gain. Suppose the farmer has 20 pigs, his loss during September would be equal to 1½ tons of grain. This also illustrates the loss of allowing pigs, grown for pork, to ever remain without growth at any time. This is really the great waste, of which no account is taken by most pig raisers.

And if this 1½ pounds gain per day is to be made in cold weather, this food must be very considerably increased, so that every consideration requires full feeding in September and October, or in the mild fall weather, instead of deferring it till winter. This same consideration requires the pig to be matured for market at the earliest practicable age. It is doubtful if there is any real profit in feeding pigs beyond 10 months old. A growth of 300 pounds should be made in 300 days, and if the same growth is made in 400 days, it will cost, at least, one-third more, and the profit is all lost.—*Nat. Live Stock Journal.*

Increasing Lean Meat in Pigs.

We may well suppose that the habit of the pig in laying on an excessive quantity of fat has been caused by long and excessive feeding of fat-producing food, and it is not likely that any sudden transformation could be brought about; but it is well known that the pigs of different countries differ in respect to fat. We have only to contrast fattened pigs of this country with those in Canada. There pork is fattened partly upon barley, but largely upon peas, a highly nitrogenous food, yielding a large proportion of muscle, and our pigs are fattened almost wholly upon corn, an excessively starchy and fattening food. The Canadian pork has a much larger proportion of lean meat and less lard. The difference is very marked, so much so, that in a market supplied with both kinds, purchasers easily select the one or the other, as desired. Wild hogs do not have such excess of fat, and the Southern hog, which is grown much slower than those in the Northern and Western States, and fed much less corn, is comparatively lean.

There can, therefore, be little doubt that the habit of depositing this excess of fat is caused by long-continued feeding adapted to that end. The hog is naturally a grass and root-eating animal, and in its domestication is fed almost wholly, in this country, upon concentrated food. Hogs fed upon skimmed milk have less proportion of fat than those fed upon corn. If young pigs are kept upon food that will grow the muscles and bones and develop a rangy frame, they will possess so much muscle when half grown, that a moderate length of time in fattening, even on corn, will not pile on an excessive amount of fat.—*Live Stock Journal.*

National Horse Show.

The first annual exhibition of what is styled "The National Horse Show Exhibition of America" will be held in Madison Square Garden, New York City, October 22 to 26. A large number of applications for entry blanks and premium lists have been received from all parts of the country, as well as from England and Canada, and it is probable that from 550 to 600 horses will be exhibited. It is stated also that all the celebrated horses of the country will be present, and the public will have an opportunity such as they never had before to see and study them.

The show will be on a grand scale, and cash prizes aggregating \$11,000 will be offered. This sum will be distributed among fifteen divisions, such as Thoroughbreds, Trotters, Clydesdales and Percherons, etc., which will be again divided into 105 classes. In addition to the regular prizes donations for special prizes amounting to \$2,000 have been already secured, and it is confidently expected that this sum will be more than doubled before the opening of the show. In the vast building there is ample room for exhibiting about 450 animals, and from present indications it is more than probable that the space will be fully occupied. The liberality of the premium list and the character of the gentlemen who have the exhibition in hand, are pretty sure to bring together some of the finest representatives of the various breeds in the country.

The Dairy.

Swiss Cows.

Swiss cows are not very plentiful in America, and yet they are excellent dairy animals. Switzerland excels in the dairy, and the Swiss cows have undergone a long and persistent training for their business. The methods of the dairy in that country of mountains and valleys, of pure water, pure air, and sweet herbage, with the periodical change from the valley yards in the winter to the mountain pastures in the summer, and also with the close personal contact between the cattle and their keepers, all together tend to produce an excellent cow for its purpose and one that is docile and very easily managed. The prevalence of local habits and customs among the Swiss people has tended to make the breeding of their cattle close, and to mark the distinction between the races very conspicuously. A certain local pride and jealousy too have helped to bring about as much improvement in the cattle as could well be attained; and thus we find that the best races of the Swiss are generally conformable to the fixed types of each one, each race or breed having marked peculiarities. The best of these cows are kept in the Canton of Schwyz, where the farmers are generally wealthy, and take much pride in the improvement and beauty of their stock. The Swiss cow is large bodied, but fine boned, of the style of a Shorthorn; the horns are light, short, clear, and tipped with black; the color is chestnut brown mixed with white; the nose, tongue, hoofs, and switch are black; a mealy colored band surrounds the black nose; the udder and teats are large and well formed, and while they differ to a great extent from our common notions about the right form which a cow should have, yet they are excellent and profitable cows, yielding 20 to 25 quarts of milk daily, and the milk is rich in butter of an excellent quality. The skin is yellow, soft, elastic, and covered with soft, silky hair; they carry remarkable escutcheons, and are extremely even in appearance, showing careful and good breeding a considerable length of time.

Several importations have been made of Swiss cows; a few of them are now in quarantine near New York. A herd was imported some years ago by Mr. David Aldrich, of

Worcester, Mass., of which the progeny has been scattered through New England and into Pennsylvania, and has turned out to be remarkably good cows. If we had a need of more good cows, of which perhaps we have, or if more variety in the breeds were desired, and this is always the case, then the Swiss cows are very excellent animals for the dairy, and would fill the bill.—*The Dairy.*

Sugar Beets for Cows.

The sugar beet is the best root for the winter feeding of cows. As compared with the popular ensilage it is of far greater feeding value, and, instead of being objectionable, it is the most desirable of winter fodder. Roots of all kinds need no recommendation, their value is not doubted, but, on the other hand, is universally acknowledged. But, as sugar beets contain more than twice as much solid nutritious matter as other roots, half of which is sugar, these are of far greater value to the dairyman than other roots. Besides, turnips of all kinds are objectionable on account of their strong odor and flavor, which are communicated to the milk and the butter. The choice, then, for the dairyman lies between the beets known as mangels and the sugar beets. The difference in value between these two roots should decide this choice. The following figures show the analyses of the two roots, with the refuse of the best sugar manufacture, and some other roots which are popular among farmers:

Per cent of—	Water.	Protein	Carbo-	Fat
		Matters.	hydrates.	
In sugar beets....	81.5	1.1	15.4	0.3
Mangels.....	85.0	1.1	9.0	0.1
Sugar beet pulp..	70.0	1.8	18.8	0.3
Carrots.....	87.0	1.2	9.6	0.1
Turnips.....	92.0	1.1	5.3	0.1

These figures are of great interest to root growers, and the more so now that the valuable and important industry of manufacturing sugar from beets is in embryo in America, and is striving vigorously to make a successful birth.

If farmers grow roots, it is clearly for their interest to grow sugar beets. And that they should grow roots is beyond question, not only for their value as cattle food, but for their special beneficial effect upon the condition and culture of the soil. In addition there is the profit to be derived from the beet as a material for a manufacture of the greatest importance.

Beet sugar making and cattle feeding, the dairy chiefly, are twin industries; they come into existence together; they live and grow together; they support each other; and they enrich each other. All that is required to start this great industry in this country is the supply of roots. If the dairymen would begin to grow these roots, a small plot first, then an acre, then two, four, or ten, and make the roots the principal support of their cows from November to May or June following, they would easily double their stock, double their produce, treble their income, and draw the sugar manufacturers in crowds to this country from France and Germany, with millions of capital, to work sugar factories, and furnish profitable employment for thousands of young men. This is no dream, but sober fact and truth. If it is not, then natural laws are different in America from those existing elsewhere.—*The Dairy.*

What is Rennet?

Once upon a time it was supposed that the action of rennet in making curd (precipitating the casein in the milk and making it insoluble) was due to the acids contained in the gastric fluid of the stomach. It was very soon discovered, however, that it was not this acid, but a peculiar action of the substance of the stomach itself, which produced the effect. That even after the stomach of the calf had been steeped in brine for months, and had been dried and exposed to the air for a time, it might be again steeped in brine and would furnish

second, and even a third supply of rennet. It was found, then, that this property was not confined to the stomach only, but that the membrane of the intestine, or even of the bladder of an animal, would exert the same effect as the stomach; that is, that it would change milk sugar into lactic acid, and would cause sweet milk to form curd. Moreover, by further use of these animal substances it was found that their agency was greatly increased and intensified by the action of the atmosphere, or of its oxygen upon them, and that long continued exposure to the air strengthened their action. A calf's stomach that had been kept twelve months became possessed of very powerful coagulating properties.

But there are other substances which have the same effects. A solution of malt in water contains a sweet substance called diastase, and this has the power of changing starch into sugar. But when the diastase has been exposed to the air for a length of time it acquires the same property that rennet possesses, viz., that of changing sugar to lactic acid and of producing curd. So that the property of rennet seems to be acquired by the action of oxygen upon the membrane of the stomach, or at least this oxidizing action certainly restores the active property of rennet after it has been exhausted.

But just here arises an evil which occurs in practice more frequently than factorymen suspect. It is this: By this exposure to the atmosphere, of insufficiently cured rennets, the putrefactive fermentation sometimes, and indeed often, takes place. The putrescent germs then carry a taint into the cheese, which in course of a short time sets the putrefactive fermentation into action and the cheese rapidly deteriorates in quality. Such cheese will not keep; and in the very hot weather a few days will suffice to spoil it. And this fact in regard to rennet should receive the most careful study and consideration of factorymen.—*The Dairy.*

Cow Stable.

The perfect cow stable, says *The Dairy*, is not yet made and perhaps never may be, until we have perfect cows; that is, such as can be furnished with a nice convenient apartment, and be taught to think, and read, and obey a set of printed rules hung up in front of the feeding manger, which they may ruminate over as they chew their cud. As yet we have to make such provisions that that cows cannot help but do just as we want them, and the stanchion and the narrow stall with the gutter behind, and a feed-trough in front to hold the food, is the nearest approach we can perhaps make to control the cows. But stanchions are very uncomfortable, especially in fly time, and are to some extent injurious to the cows in some ways. The exact opposite of the stanchioned stall is the roomy, loose stall in which the cow is at liberty to move about at will. In such a stall, with a deep bed of fine litter, such as leaves, cut straw or sawdust, the cow may rest in luxurious freedom and will be cleaner than in the stanchion. A stable of this kind giving a cow abundant room, viz., 7 by 9 feet, and a separate stall for each, may be built cheaply, viz., for \$10 per head; and if well arranged will be found very convenient. But still there are inconveniences even in this plan, for the cow in all her wilfulness will, at times, foul the feeding trough in a manner that disgusts her particular owner, after all his trouble to make her comfortable. A modification of this plan is given by a well known dairyman who writes under the name of "Fernwood" (his residence) to the *Breeders' Gazette*, as follows:

"Kept in confinement a cow should have the freedom of a stable at least 8 by 12 feet. Across one end of it there should be a stall

wide enough for her to stand in, but not wide enough to lie in. The manger should be as high as will allow her to eat from the bottom of it; have a door opening out through which she can be fed and watered, and a box at the side in which to keep a supply of salt and ashes. Some cows will pull their fodder over such a manger. A cap extending inward three or four inches will prevent it. A short floor with a door behind compels her to stand up to the manger while eating and prevent her tramping the manure about the stable. The drop is kept partly full of earth or coal ashes.

"The floor should be of earth, except in the stall and where she lies. Concrete answers a very good purpose. A plank floor is too dry for the feet of a cow which never goes out, and they grow out of shape, whereas upon the earth or concrete she keeps them worn off. Behind the feeding stall is the door to the manure shed, which is kept closed to exclude the effluvia. Alongside of the stall a bountiful supply of straw or other litter is kept, on which she makes her bed. A little door opens out of the manger into this through which the orts and refuse of the manger are passed. All droppings and all soiled litter are thrown out twice a day, and all wet places have dry earth or coal ashes sprinkles over them. Almost the entire amount of excrementitious matter, solid and liquid, is found in the drop behind the feeding stall. A deeper drop with a slatted floor over it has been recommended and may be an improvement.

"The stable is well lighted and thoroughly ventilated. Fly-screens cover every opening in the summer, and the cow's comfort is consulted in every particular. She moves about and stretches her legs at leisure. The corner of her stall serves as rubbing post, and she seems to enjoy that. It is true that she once in a while shows a disposition to have a time and makes the litter fly, and she sometimes prances around as if she would enjoy using her horns upon something besides the dry boards. But her every act seems to me an expression of gratitude for not being tied up by the neck as other cows are. I cannot help taking to myself some small credit for effort to escape the self-accusation of inhumanity to so useful a beast as the family cow, and I hope to be able to arouse something of the same sentiment in others."

And "Fernwood's" effort is praiseworthy if only for its purpose to arouse a kindly sentiment in favor of the useful, gentle cow.

Poultry Yard.

Marketing Poultry.

There is profit in poultry raising, when judiciously managed; but to secure it, quite as much depends upon the manner in which it is packed for market, as upon the most careful attention to the selection of the best breeds, and of proper food during the season of fattening. The time has gone by for disposing of anything in the shape of poultry at remunerative prices, unless it comes to market in the best order not only as regards plucking, but also as regards the packing of the birds. If their bodies are disfigured by over-scalding, by bruises, or by rents in the skin, the buyer, whether at wholesale or retail, begins at once to haggle about the price, to insist upon a reduction; and he generally obtains it at such a rate as to leave the producer not a cent of profit. There has been a marked improvement in this particular in recent years—notably in the last two; but there is room for a great deal more; and our country friends who depend upon a quick return in cash, and good prices for their shipments of poultry to this market, (from whence all New England draws its chief supply,) should constantly bear in mind the importance of the most careful attention to the plucking, and, also, the packing of their birds. —*N. E. Farmer.*

To Fatten Fowls or Chickens.

Set rice over the fire with skimmed milk—only as much as will serve one day. Let it boil till the rice is quite swelled out; you may add a teaspoonful of sugar or molasses, but it will do well without. Feed them three times a day, in common pans, giving them only as much as will quite fill them at once. When you give them fresh feed let the pans be set in water, that no sourness may be conveyed to the fowls, as that prevents them from fattening. Give them clean water or the milk of rice to drink; but the less wet the latter is, the better. By this method the flesh will have clear whiteness, which no other food gives; and when it is considered how far a pound of rice will go and how much time is saved by this mode, it will be found to be cheap.—*Moubray on Poultry.*

Weight of Eggs.

After repeated trials at Paris, it has been decided that twenty eggs count as a kilogramme, or two and one-fifth pounds. The breeds of fowls that lay large eggs, averaging seven to a pound, are La Fleche, Houdans, Crevecœurs, and Black Spanish; those laying medium-size eggs, averaging eight or nine to the pound, are Leghorns, Cochins, Brahmas, Polands, Dorkings, Games and Sultans; the Hamburgs lay about ten eggs to the pound. The weight of the eggs of ducks is from two to three ounces apiece; turkeys three to four ounces; the eggs of the goose, from four to six ounces.—*Rochester Tribune.*

Horticulture.

The Orchard and Fruit Garden.

At this season of the year, it may be well to carefully consider the subject of *Selections of fruit intended for this fall's planting*, as but a short period of time has yet to elapse ere we will be to the proper season for transplanting fruit and shade trees. We have on several occasions heretofore, suggested to our readers, or such of them as are inexperienced in these matters, what varieties of the different classes of fruit, have under thorough tests proved desirable and profitable, and to regard with due caution the *choices of kinds*. Five to eight years spent in waiting and caring for an orchard to come into bearing, and then to find that one-fourth of the trees, or more perhaps, of said orchard are of kinds wholly unsuited to your climate and soil, is a loss not easily ascertained, even by the aid of mathematics. A few days back we were waited on by a gentleman who was engaged in marketing his first crop of fruit from a well cared for peach orchard, and who was anxious to know if trees, such as his, could not be re-budded, as he had one variety of fifty odd trees, that is totally worthless for market purposes. After explaining in detail the uncertainty attending the operation under such circumstances, he returned home convinced that the shortest road to a substitution for that variety, was to grub up the trees, replace the somewhat exhausted soil in the immediate spot where the trees grew, and plant others. Had his orchard been of apples or pears, regrafting would have been practicable and best; not so, however with the peach, but in either case a loss of time and labor inevitably follows. But to proceed with a list: We will begin with the APPLES, and for early summer varieties, for either domestic use or for market, any and all of the following named will be found good, those marked with a star would be our choice if we did not wish so many kinds.

*Fourth of July, *Early Ripe, *Primate, *Fanny, Red Astrahan, Early Harvest, Summer Queen, Early Sweet Bough.

For fall and early winter use: All of the following have proved to be meritorious kinds.

*Maryland Maiden's Blush, *Fallwater, *Wine or Red Streak, Gravenstein, Fall Pippin, Bachelor.

For winter or keeping kinds: The best Southern varieties are required for southern Maryland and Eastern Virginia. Soil and situation too, have their influence on these, to a more perceptible degree than in the early and fall varieties; as for instance, on light and sandy soils, some kinds succeed much better than others; and while a variety may prove very unsatisfactory on soils of such a nature, very often the same kind, if planted on heavier soils on the same farm, will succeed admirably. Those named below in *italics* have proven best suited to sandy soils with us.

Limburtwig, *Moultrie's Winter*, *McNash*, *Winesap*, *Rawle's Janet*, *Yates*, *Turner's Green*, *Fusut*, Kent Island Pine, *Tockesbury Blush*, Nickajack, *Shockey*, *Cowan's Seedling*, *Stevenson's Winter*, Buncombe.

Sandy soils are, of course, as nearly every one knows, not the soils to be preferred for growing apples; but where a freeholder has no other, then he should select such as will succeed best with him in such situation. For early market kinds, we would nearly or quite as soon, have a rich sandy soil as any other.

For a Peach orchard, we think the *surest* plan is to plant so as to cover the entire season from first to last, then if the quite earlies are too low in market to be profitable to the owner, he has still two more chances, in the middle and late kinds, and vice versa. For first early, either Alexander, Amsden, Musser or Waterloo, there being so little difference in any respect, as to warrant the assertion that if you have one, you have all. Early Rivers next, followed by Troth; then *Foster or *Crawford's Early (these two are about the same); next *Mary's Choice or *Reeve's Favorite, these two ripen at same time and are both fine; next Moore's Favorite or Old Mixon Free, here again we have two peaches very similar in all respects; next *Crawford's Late, then Steadley or Shipley's Late; then *Beer's Smock, next *Gearey's Hold On; then Heath Cling; then Salway, and last Bilyeu's October. Those marked with a star are yellow fleshed kinds, and while there are a large number of good varieties not named in the above list, those named *are good*, and completely cover the peach season.

For STANDARD PEARS, we would plant as follows: Osband's Summer, Clapp's Favorite, Bartlett, Seckel, Howell, Beurre D'Anjou, Lawrence, and sparingly of Vicar.

For Dwarf, Duchesse D'Angouleme, and nothing else. As to the Keiffer, Le Conte, etc., a few trees to test is as far as we would feel like venturing.

For PLUMS, our first choice for market with a view to profit, would be Wildgoose; our second choice would be the same. The proof of the pudding is said to be the eating of it. For the last seven years we have had Wildgoose plum pudding, that served to strengthen us greatly, in the execution of the burdensome task of paying our debts; hence, when we speak well of it, we are only "praising the bridge," etc.

Among the European class of plums, the Richland has, all things considered proven most desirable.

For Damsons, we greatly prefer the Shropshire.

CHERRIES.—Early Richmond, Louis Philippe, Mayduke, Black Tartarian, Graffion, Reine Hortense, and Gov. Wood.

APRICOTS.—Early Golden and Moorpark with a trial tree of the new "Russian" which is represented as being so much hardier than the others.

QUINCES.—Orange and Champion.

GOOSEBERRIES.—Houghton and Downing.

CURRENTS.—Red Dutch for general crop; White Grape and Black Naples.

STRAWBERRIES.—For home use, Cumberland, Crescent and Kentucky.

RASPBERRIES.—Red, Cuthbert, Black, Gregg, Wilson and Kittatinny.

GRAPES.—Concord, Worden and Moore's Early for black varieties, Brighton, Salem and Delaware for red, and Lady, Elvira and Martha for white, with as many of the newer kinds for trial, as fancy, governed by means, may dictate.

Kitchen Garden—October.

It is now rather late to sow or plant, unless, perhaps, onion sets and spinach if the latter has failed to come up properly. Spinach, onions and strawberry beds should all be cleanly hoed before winter sets in. Heel in strawberry plants for spring planting and do not leave too many runners on the plants that to are bear next season.

We now begin to lift the root crops, beginning always with beet, which is the most susceptible to frost. After topping, put them up in little pyramids where they grew, covering slightly with straw and sufficient earth to keep the straw in place. They may remain there until wanted if care be taken to cover them up gradually to the depth of a foot as the cold increases, always remembering to ventilate by means of a bunch of straw or other device, or, if the crop is small they may be piled up dry in the cellar. In a very dry cellar they may have to be mixed with sand or earth to keep them fresh.

Gather ripe Lima beans and remove the poles. Clear the garden of tomato vines and everything unsightly. Plow all you possibly can, and plow the same ground again in spring. Whatever it may be for the farm, I am satisfied that one plowing before a crop is put in is not enough for a garden; everything connected with the garden should be done more thoroughly. It is a matter of regret with me that I have not a good subsoil-plow, and, I fear, not much opportunity to use it if I had one. Not only plowing and subsoiling should be attended to, but drains should be placed closer together and manure applied far more liberally than to the best part of a farm.

The middle of the month is quite early enough to begin to touch celery. It should then get enough earth put to it to keep it straight, whether intended to be left out doors or housed. If the celery has been planted in rows the small plow will be of great use in earthing up.

There ought now to be some leisure for making improvements. Plowed land should be freed from stones and the stones broken up to improve the roads or used to drain the land. A job that never gives out with me is the getting out and composting of swamp earth, woods earth, or indeed any good fresh soil that has not been cropped. This is used in frames, in flower and vegetable beds or as a top-dressing anywhere. It is well enriched with stable manure, and besides, before it is used, it has been for months the medium for decomposing the bone dust and holding the guano in a finely comminuted state so that when applied it acts like a charm. Frequent turnings are necessary, and if it has been liberally manured the heap will get very light to handle at the last turning.

Rhubarb and asparagus beds should be trenched and plenty of manure worked in. The bottom of the trench is a good place to bury large quantities of weeds or decaying rubbish. It will act, for a time at least, as drainage and also be beneficial where the land is already drained. Planting should be delayed until spring, as the ground must get time to settle.

I remarked some months ago that I had failed for a number of years in succession to raise any kind of winter squash, but that I had seen late planting recommended and

meant to give it a trial. Well, I planted some on the 3d of July, several weeks later than usual, and sure enough they are doing finely, fruit and vines thrifty and promising. If it should happen so another year, then I would be convinced that there is something in it.

Whilst I still think that winter-sown cabbage is best for the main early crop in private gardens, I consider it advisable to have a few rows of fall-sown plants along side of them to begin the season with, as the latter will be at least two weeks earlier.

Now is a good time to plant raspberries and blackberries. Cut them close down almost to the root and cover quickly. Try the close-pruning system all through their growth, and continue to try a few trained to stakes in the old way. It is only by constant comparison of various methods of culture that we are enabled to speak confidently and act understandingly.

The Bible tells us that there is hope of a tree if it be cut down that it will sprout again. Try the plan with your old exhausted vineyards rather than grub the vines up. Two years ago I cut down alternate vines, where they were crowded, close to the ground with the intention of digging them up some time later on. They were left, however, and most of them made splendid new growths, which encourages me in the design to cut all the old plants down by degrees.

JOHN WATSON.

Harvesting Apples.

Nearly every grower has a way of his own to harvest apples. Many of these methods are neither expeditious nor profitable. A good crop of fruit is often half-wasted through lack of good management in picking, packing, and storing. It is, of course, an unprofitable practice to knock or shake off fruit. This is especially the case with the tender-skinned sorts, as Red Astrachan and Northern Spy. Fruit that is not to be immediately consumed should be carefully hand-picked. The practice on one of the largest and best apple plantations in the country is to provide a good number of round-bottomed half-bushel handle baskets, to the handles of which are secured light S-shaped iron-hooks, which serve to hang the basket on a branch. If the basket be lined with thick cloth, it will be better. An agile person in a well-trimmed tree will pick rapidly with these baskets. It is seldom necessary to shake off apples. If an occasional branch be out of reach, however, the apple should not be shaken off until the ground under the branch is cleared of all fruit. A small active boy, one who is not afraid to climb, will reach nearly all the fruit on any tree. In old apple districts we have frequently seen boys so well trained to apple picking as to reach very quickly every apple on the largest and most spreading trees.

Apples should be packed in the orchard. It does not pay to load them into a wagon and carry them into a barn to be packed. It is a waste of time and is, above all, injurious to the fruit. It always pays to sort apples, whether one is packing for market or home use. If not sorted and carefully graded the whole barrel will very likely sell for second-class fruit. The keeping quality of the apples will not be good, and consequently they can not be held for spring sale. Care should be exercised that the fruit is packed tight. The apples should not be thrown in the barrel promiscuously. They should be shaken down at intervals. Fill the barrel rounding full and squeeze them down with a screw press. Apples which are jammed against the head of the barrel seldom rot, especially if the head is soft wood. The contents of a barrel should not rattle when the barrel is rolled. Loosely packed fruit is much injured in shipping. After packing, the barrels should be turned on their sides and allowed

to remain in the orchard or under a shed for some days previous to storing. It is important to know just when apples should be harvested. Winter apples are usually picked too early. If most sorts are allowed to hang until after several good frosts and the leaves have largely fallen, they will be in much better condition for keeping or for sale. Rhode Island Greenings, however, especially at the West, are apt to become overripe if left too long. Baldwins, on the other hand, ripen slowly and should be harvested late.—*American Cultivator.*

Apple Cider.

The apple crop, from indications in the States where the largest quantity is exported, is likely to be short this season, and consequently the price of cider will be higher than usual. The farmer, therefore, who has been fortunate enough to have grown a good crop will do well to turn his fruit into cider. The following points as to making and keeping it, which we copy from the *N. Y. World*, may be of service to some:

October and November, according to the climate, or when light autumn frosts are occurring and the fruit is in all the perfection of its ripeness, is the time to make a prime article of cider.

Cider from late apples is of better quality, and possesses more body than that from early apples. It will also keep much longer.

Cider varies in character not only with the season of the year at which it is made but with the quality of the apple. The best cider is made from apples which are somewhat astringent in their properties of flesh and juice—apples the juice of which contains the largest per cent. of alcohol. The strongest cider comes, as a rule, from apples which contain the least amount of juice. The Hessian, Canfield, Virginia and other of the crab varieties are chiefly esteemed as cider apples; so are the russet and pippin varieties, while sound small apples of almost all sorts make a fairly good article.

The opinion is general that the best cider that reaches the larger markets is made at steam mills, where the fruit is crushed in large bulk. Cider made in a large press, other things being equal, keeps better than that made in a small hand-press. A richer, fuller-flavored and better colored beverage is obtained when the pomace is allowed to remain in the vat a few hours and turned occasionally to induce fermentation before the juice is expressed. The color of the juice is influenced by the management of the pulp.

Different varieties of apples impart different flavors, but from any one kind two distinct varieties of cider may be produced—the one by expressing the juice before any change of color occurs from exposure of the pomace to the atmosphere, and the other after this exposure. In making what is called champagne cider, therefore, when a light-colored liquor is desired, the juice is pressed from the pomace immediately after grinding the latter.

Professional cider-makers employ cider-cloth for the press. The best barrels for storing cider are whiskey or brandy barrels. When these cannot be obtained, great care should be observed to thoroughly cleanse with lime or wood ashes and water the barrels to be used. In addition to this, cleansing, it is best to fumigate with matches, or rolled brimstone dropped into the barrel afterwards rinsing the barrel with hot water and draining it dry.

In some mills the juice, after coming from the presses, is poured into tanks, where it is allowed to ferment for three or four days, the temperature being regulated by steam. During this process a part of the sugar is converted into alcohol, which is necessary to preserve the cider. From these tanks the cider is next run through filters, barreled and placed in a cool cellar, where the barrels be-

ing kept well filled it stands until time for bottling. At time of bottling it is sometimes charged with carbolic acid, and sometimes a little sugar is added, which gives it fermentation in the bottle and a natural sparkle. This cider is usually sold as champagne cider.

Farmers, who make small quantities of cider in ordinary mills, as a rule fill the barrels and place them in a temperature between sixty and seventy-five degrees, with the bungs loose to assist fermentation. As the froth during fermentation works out at the bung-hole, juice reserved for the purpose is added to the barrels. When the hissing sound has ceased the cider is considered ready for the first racking. Then it is drawn off into clean barrels in which the bungs are tightly placed for a few days and then loosened to induce further fermentation. The cider is next racked a short time and the barrels tightly closed. When intended for draught use it is kept in a cool cellar. If designed for bottling, this should not be done later than the early spring.

Fruit and Drying in California.

Fifteen years ago, before the Central Pacific Railroad was built across the Continent, the only market for California fruit, besides the home demand for fresh fruit, was that of the mining camps and shipping for dried fruit of low price and poor quality. Coasting vessels and ships sailing to China, Japan and the South seas laid in large supplies of dried apples and peaches, but seldom of plums or pears. It was all sun-dried, artificial heat not being used, except by a few hopeful inventors. Hand labor was used, even in peeling the fruit, though much of it was dried with the skin on, being spread by the orchardists' children on the roofs of out-buildings, or on long scaffolds built in open spaces in the orchards. But even in the rainless summers of California sun-dried fruit is dark in color and is liable to contain the eggs of insects. It had for the latter reason to be put through a process of kiln-drying before long voyages could be undertaken. The whole business was a local and comparatively trifling one. Nobody made any money at it; it merely gave wages to those engaged therein.

At present the state of things has changed greatly—how greatly can hardly be told within the limits of a single article. Capital has been invested and new processes discovered until the fruit business on the Pacific coast is divided into three branches, and few undertake to devote their attention to more than one at a time. There are orchards for producing fruits for drying; orchards producing fruits for canning; orchards producing fruits for shipping fresh to the Eastern and Mississippi Valley States. Each class of orchard receives different care, requires different soil, is composed of contrasted varieties.

The lesson that has been bought at no little cost by California orchardists, and one that Maryland orchardists must also learn, is that the successful production of fruit involves the scientific study of soil and climate and the stern sacrifice of what one might wish to grow to what one discovers to be indisputably best for the given locality. In California the effort is to put peaches on peach-soil and prunes on prune-soil; in other words, each successful orchardist is in a large degree a specialist. We shall have famous pear orchards, famous apricot orchards, famous orange and olive orchards, just as England has famous rosariums and pineries. The commercial orchard is no more planted on the type of the small family orchard.

But to return to the drying process of the present time in California. Some of the drying establishments employ several hundred operatives and buy the fruit of many orchards, sending their agents over the country long before the fruit is ripe to make con-

tracts with the growers. This year two and three cents a pound was paid for apricots, and about the same for peaches and plums. It pays on good soil to grow these fruits at one cent a pound, for the crops are very large, this being the chief advantage of fruit-growers in California. Stone fruits are first pitted by a small machine which does its work rapidly and completely, and is then placed on large wire trays. Each tray holds 25 pounds. Apples and peaches and pears are peeled; first, the apples are nicely cored. The machines used in this work are different from those in use in Maryland, being Pacific coast patents, and do the work faster, as labor is the most heavy item with us. About 200 of these trays of fruit go in one dryer at once. First, the fumes of sulphur are allowed to ascend through the trays for a few minutes which insures that the fruit will retain its color. Next comes hot air from the furnaces, and in ten hours the fruit is ready to take out. It is aired on a floor, in the shade, for a few days; steamed so as to make it pack closely; put in boxes and sent to market. The dryer is so arranged that any tray can be examined in a moment, and the temperature is equalized. There are many patents, but most of the successful dry-houses of California own rights and "improvements" of their own. As far as possible the fruit is moved by machinery, either by an endless chain or elevators. About 200 degrees Fahr. is the proper amount of heat. One pound of dried prunes is the product of 4½ lbs. of fresh fruit. Of apricots, 6½ lbs. of fresh make one pound of dried. There are numbers of establishments in California that produce from 400,000 to 600,000 lbs. of dried fruit for market every year.

C. H. S.

Baltimore.

Freesia.

Last winter our attention was attracted by some very handsome, waxy-petaled, white flowers in the window of our enterprising Charles street florist, Mr. John Cook. The flowers were produced from bulbs growing in small pots, and looked like white Babianas. In answer to our inquiry Mr. Cook stated that they were called *Freesia Refracta*. The name was entirely new to us, and we set to work to search it up, with strong doubts about its correctness. Every botanical work in our library was consulted, but no such genus as *Freesia* could be found among the Iridæ, to which the plant evidently belonged. We had about come to the conclusion that the plant was a white variety of *Babiana*, when we accidentally in reading came across a notice of a monograph on the Iridæ, by the German botanist Klate, in the "Gartenflora" for 1874. Klate separates the Genus *Freesia* from *Sparaxis* and names the plant heretofore known as *Sparaxis Thoubertii*, *Freesia Leichlinii*. The *Freesia Refracta* is another variety of a purer white than the first named. The plant belongs to the Iridæ, which includes the *Gladiolus*, *Iris*, *Babiana*, *Tritonia*, *Ixia*, *Sparaxis* and many other bulbous plants. It is a native of the Cape of Good Hope. A correspondent of the *Gardener's Chronicle* (London) speaking of *Freesia Leichlinii* says:

"It is of very easy culture, potted in a mixture of two thirds peat and one-third loam, with plenty of coarse sand. Our plants were potted in October and stood out of doors, protected by a hand glass, until the last of November, when they were removed to a cool house where they have flowered profusely."

We predict this will be a popular flower for winter forcing, especially for Easter, as we doubt (judging from its relatives) that it can be had in bloom as early as Christmas. Mr. Cook, we believe, has imported a quantity of the bulbs both for his own forcing and for sale.

W. F. MASSEY.

Hampton, August 25, 1883.

Propagating Plants for Stock.

To have flowers for next summer's display, the gardener will now begin to make his preparation. Where vast quantities are required, he will have determined, mainly, by this time the kinds he will require, and also something near the relative quantities of each. The next step is securing of stock plants enough to furnish him with cuttings for propagation of his plants in the winter, as, with the exception of *Geraniums*, he may freely strike his cuttings any time after January. *Geraniums* are best if struck and wintered over as young plants.

One requisite for his work is a propagating house where he can keep the top heat as low as possible, and the bottom heat some ten degrees higher; with such facilities there will be no difficulty. He will begin with the more tender kinds, as *Coleus* and the like, so as to be sure and get his cuttings off before any fear of their becoming chilled with early frost. For the amateur, with possibly only a single green-house, the best way is to use the pan system for striking cuttings. This is nothing more than filling shallow pans or saucers with a couple of inches of sand and thoroughly saturating this with water, making it like mud, in which condition it must be kept until the cuttings are rooted. Almost any ordinary bedding plant, made into cuttings, treated this way and stood on the green-house stage, or even in the window of a dwelling will root freely.

After rooting the same treatment is given as for those struck in the cutting bench; that is, they require potting into small pots and to be kept shaded until established.

Except for large baskets, no old plants are kept over the winter, it being found that young plants full of vigor and uniform in height and growth are the best to rely on for bedding. With some kinds that have abundance of shoots a very few of the plants will furnish all the stock required to get the cuttings from, and nearly all varieties if properly cared for will easily furnish 100 cuttings each; hence the space in a green-house need not be taken up with stock plants farther than necessary, the room being better filled in the early winter months with plants that will produce cut flowers which are always acceptable.—*H. Sanders in Prairie Farmer.*

Preserving Cut Flowers.

Remove them from the stems with a sharp knife, not with scissors, which crush and bruise the stalks. Put those with succulent stems into vases of water, where they will keep for ten days if the base of the flower stem is cut off every morning. Charcoal, camphor, sal-ammoniac and salt, are sometimes recommended, but the advantage of using them in water is more apparent than real. If they have wilted, they may be temporarily revived by recutting the stalks, and plunging them into water as hot as the hand will bear for a few minutes, then place them under a bell, glass, or inverted shade. Tin or zinc pans, with close fitting covers, must be used when flowers are to be kept fresh for a few days, a layer of moist sphagnum or hyssop moss being laid on the bottom. Flowers laid on wet moss in a tray covered with a thin, wet napkin, may be placed on the cellar floor, and will keep fresh for a considerable time. Wet sand or wet moss may also be substituted for water in opaque vases. When cut flowers are to be kept, care should be taken not to allow them to be fertilized, as they seldom last long after this takes place. Before maturity cut out either anthers or stigmas; or, if this will disfigure the flowers, gum the anthers. *Rhododendrons*, *azaleas*, &c., are frequently prepared for bouquets and wreaths by letting a drop of gum arabic fall down into the centre of the flower. It hardens at the base of the petals and firmly unites them to the base of the stigma so that the petals cannot drop at some unlucky moment and disfigure the whole arrangement.—*N. Y. Tribune.*

What Roses to Plant.

The lamented H. B. Ellwanger, in an address before the Western New York Horticultural Society, said: A common error committed by beginners in Rose culture is attempting to grow varieties that are of delicate habit; attracted by great beauty of flower, or fragrance, they do not consider, or do not understand, that vigor of growth, perpetuity of bloom, perfect hardiness are very seldom combined with the qualities which have allured them.

The most popular Roses are the Hybrid Remontants; these are moderately hardy, and produce flowers of the highest finish. Among them none are more desirable for tyros than *Alfred Colomb*, *John Hopper*, and *General Jacqueminot*. These three varieties probably absorb more of the desirable features that go toward making the perfect Rose than do any others which could be named; they blend well, and are effective planted in a bed together or separately.

A pleasing departure from the usual method of growing Roses is found in the pegging-down system. In this way the long shoots are carefully bent down, and fastened to the ground by means of hooked sticks or pegs. As a result of this system, an immense quantity of blooms is produced. True, the individual flowers are not of equal finish to those grown in the ordinary way, but we get a mass of color, a striking effect, that is not otherwise to be had. I do not advocate this method to exclusion of the other, but its occasional use will certainly be satisfactory.

Besides planting Roses in beds, we should scatter them through the borders of our gardens, giving the more favored positions to the delicate kinds. Among these we find *Eugenie Verdier*, the most beautiful of the Victor Verdier type, a Rose of very delicate tint,—deep silvery,—pink tinged with salmon; lovely in the bud and in the open flower; attractive as maid or matron. Not only the flowers, but the foliage of this variety which is beautiful in both flower and leaf is *Charles Lefebvre*. This has the thick texture of petal, and something of the same form as *Eugenie Verdier*, but the color is that of *General Jacqueminot*, deepened by a shade of satiny-purple.

Among the somewhat neglected Roses are *Marguerite de St. Amande*, a deep pink, beautiful in the bud state, and flowering through the summer and autumn months. *Baroness Rothschild*, a blush-pink, with exquisite cup shaped flowers; single blooms of this kind, during December and January, sell in New-York for one dollar, and even two dollars each. It has always been a great favorite with exhibitors. *Francois Michelin* is a striking variety, intermediate in character between its parent *La Reine* and *General Jacqueminot*; it has large, deep rose-colored flowers varied with lilac, of splendid globular form. A valuable feature is its late blooming, the flowers not developing until most others of the same class are past their prime. *Elise Boelle* is perhaps the finest white Rose that we have; it blooms profusely all through the summer; has full globular flowers, of the most perfect form; the center is generally tinged with blush. It is not possible to imagine a flower of greater beauty.

Moss Roses have long been favorites in our gardens, but it is wonderful how many inferior varieties are grown; sorts are disseminated that are not mossy, are not beautiful. None of the Moss Roses will compare with those of other classes as regards the open flowers. It is the fine buds that make them so attractive, and if a Moss Rose has not a well-formed bud it is worthless. The best of the Mosses are *Gracilis*, *Crested* and *Common*, a triad whose crested loveliness has a common grace.

Not one of the least of the qualities we desire in a Rose is fragrance. In this regard all classes must do homage to *La France*, the

sweetest of all Roses. Compelled to choose one variety, this should be ours. To be sure it is rather tender, but it can easily be protected, and so winter safely. It does not always open well, but it is a simple matter to assist,—an operation not practicable with most varieties that do not open perfectly. If *La France* does not develop well, by pressing gently with the fingers the point of bloom, and then blowing into the center, the flower will almost invariably expand, the pent-up fragrance escape, and almost intoxicate with delight our sense of smell.

Not enough attention is given to the Tea Roses and Bourbons. The Hybrid remontants justly claim our first attention when they are in their perfection; but after their first blooming is over, throughout July, August and September, they are much less attractive than many monthly Roses. Varieties like *Gougin*, *Gerard Du'ois*, *Homer*, *Sombreuil*, *Madame de Vaux*, *Marie Van Houite*, *Madame Caroline Kuster*, will give a continuous supply of flowers throughout the summer and autumn.

The fact of Tea Roses being tender should not debar us from their culture; the truth is, they have in this matter been abused. The sorts I have named are in reality but little more tender than *La France*, the Hybrid Noisettes, and all the *Victor Verdier* race of Hybrid Remontants. If earth be heaped up about the plants, and a slight covering of some loose material, like branches of evergreens, be given, the hardier sorts of monthly Roses will winter in safety. There is sometimes a loss of plants, but the percentage is light, very little more than happens to the so-called Hardy Roses.

In giving this protection, care must be observed not to smother the plants by entirely excluding the air; this never occurs from the use of evergreen branches, but when straw or litter is taken, sticks or boards should be used to prevent the material matting together. This is one of the cases where it is possible to kill by mistaken kindness. If it be objected that this covering of the Roses is troublesome, then we must reply to the objector,—you are no true lover, you are but a false knight; you cannot have beautiful Roses in your garden, because you have not them in your heart.

THE POMOLOGICAL SOCIETY.—At the second day's session of the American Pomological Society at Philadelphia, the Marshall P. Wilder medals were awarded to Marshall P. Wilder of Boston (the founder), for collection of pears; Minnesota State Horticultural Society for apples and grapes; E. Satterthwait, Philadelphia, for peaches, apples and grapes, and J. H. Ricketts, Newburg, N. Y., for seedling grapes.

The association elected the following officers for the ensuing year; President, Hon. M. P. Wilder, Massachusetts; First Vice-President, P. J. Berckmans, Georgia; Secretary, W. J. Beal, Michigan; Treasurer, B. G. Smith, Massachusetts.

The Maryland Horticultural Society's Show.

The annual Flower and Plant Exhibition, held from the 25th to the 28th of September, was a very attractive one in its arrangement and effect of the exhibits, but the attendance was smaller than ever before. This was due to the high rate of admission—one dollar—which was adopted with a view to induce persons to take membership tickets, the privilege under which are very liberal. The fruits were good but not many, and vegetables were so few as to be almost a cause of mortification. Cut flowers were plentiful, and floral designs not only numerous, but as a rule in the best of taste.

The main exhibitors were Messrs. Wm. H. Perot, T. Harrison Garrett, Patterson Park, Robert J. Halliday, John Cook, S. Feast & Sons, James Pentland, William D. & Arch. Brackenridge, Charles Hamilton, Robert Patterson, Wm. Fraser, Alex. Scott, Druid Hill Park, N. F. Flitton, J. A. Hamilton, C. C. Carman.

The Autumn Frosts.

The early autumn frosts which reached us so early this year were sufficiently pronounced to induce gardeners and farmers to be on the alert in preparing for severer ones that may now be expected, and have their vegetables and other late crops gathered in as soon as practicable.

The New York *Herald* remarks that the late frosts are not to be regarded as premature. Last year vegetables were killed by frost in some parts of New Hampshire and Iowa before the end of August. Severe August frosts occurred also at some points in the Northwest in 1881 and in 1879. In 1880 untimely frosts were reported on August 16, in Massachusetts, quite generally through New Hampshire, in New York and even in New Jersey.

If we may judge from the frost indications of other years the present chilly weather is not necessarily a sign of a cold autumn. The memorable mild autumn of 1879 in those portions of the country lying east of the Rocky Mountains was preceded by early September frosts and cold weather in the Northern States. However low the temperature may now be in the Northwest, we may therefore still hope for a generally moderate season on this side of the continent.

Promoting the Walking Gait.

A correspondent of the *Country Gentleman*, says: This is the most valuable property in the gait of a horse for the farm, where nearly all the work has to be done on a walk. A horse that is a good stepper will do from a quarter to a third more work than a slow walker, and he will do it with the same ease, as it is his natural gait, and with proportionately less expenditure of energy; that is, the work will be done with less expense of food and waste of flesh for an equal amount of work. Then there is the ready action, requiring no urging, and the celerity which hastens the finishing of the work, an important item where the work is crowding, as in the spring. Besides, both man and horse are free from worry. In making up your team, have it matched in a gait as nearly as possible. The pair will work so much the better, whether fast or slow walkers. Of all things, avoid coupling a fast stepper with a slow one. Where thus united, the good horse will fret, and mischief may result to his gait and his temper. Gait is hereditary, yet, like other qualities of nature, it may be greatly improved by training, especially if begun in the colt. I have long wondered at the apparent indifference on this subject. Is it that the value of a walking gait has escaped notice, are that it is considered unworthy of attention, or incapable of improvement? As well say a trotting or running gait cannot be improved. We have a quality here to be developed which is of far more value than the sporting qualities of the horse.

What the farmer wants, and what the teamster and draymen will not object to, is a good strong walker. Such a horse is not lazy, and less likely to be an awkward and stumbling horse. He lifts his feet and puts them down well. There is no drag in his gait, as with a slow, shuffling or creeping brute. A good walker is usually possessed of some spirit. This is necessary to sustain his gait, if he is to become serviceable. It is also an advantage in his training, requiring little more than restraint to prevent him from breaking his walk. Beginning with leading the colt to halter as soon as he has the use of his feet well, before he gets accustomed to break, his walk may be readily improved and the habit after a while established, if he is of tractable disposition. If, while running with the dam, he should, in his capering, get into a trot or a run, it will not seriously affect his halter habit, or, later on, his practice on the

traces. Neither does his walking practice interfere with his trotting, which, during the course of the former, may also be indulged and improved. But let each be kept distinct for the time, so as to secure an impression. The colt will soon learn to know what is wanted, and if properly encouraged will respond, if he is what he should be, tractable, intelligent and sufficiently spirited to carry out what is intended. If awkward or stupid, he is not worth the trial.

In the absence of a special trainer of colts, any man of intelligence who feels an interest in the matter, and has patience and control of his temper, may be trusted to undertake the work. It is all the better if he be the owner of the colt. Not that he will succeed in a full development, but he is pretty sure to so far improve the value of his horse as pay well for the effort, and it need but little improvement to do that when the long service of the horse—some twenty years or more with good treatment—is considered. At first, lead your colt by the halter. Gradually increase his speed. Here will occur the greatest difficulty, through the eagerness of getting him advanced. By urging him too much he will break, and frequent breaking, becomes itself a habit, will antagonize and defeat what it is intended to promote. Patience, with time, is required, and it is the only way. The colt is to have his walk so gradually advanced that he does not become aware of it. When the colt becomes strong and an advance has been made in its gait, so that leading it becomes too much of a task, mount the mare and couple the young one with its dam. This still will accustom it to being paired and kept in place. The training to a walk requires as much exertion as applies to trotting or running. The exercise may, therefore, be more frequent and of longer duration, but must necessarily be mild at first and decided throughout, giving the colt to understand that you are its master, but a kind master.

If there is a better way than this, let it be employed, for the advantages within reach here should no longer be ignored. The thing is to get it started. It was not so with trotting, the possibilities of which were not known till a thorough test had been made, and the result surprises us all. The walking gait is in the interest of the farmers. No excitement attaches to it, as with trotting and running, which are sustained by the excitement. It is a matter of business only, and may be classed with farm improvements.

AGRICULTURE IN THE SOUTH.

Progress in Agriculture—Is there any Room for Further Improvement?

By TH. POLLARD.

Ex-Commissioner of Agriculture of Virginia.

In our number of 1st September we omitted to speak of the Agricultural Department of Tennessee. Under the administration of Dr. Killebrew it was very efficient, but he has been superseded by some political appointee, we do not remember who, and we have seen no reports from him. Dr. Killebrew sent forth many able reports on various agricultural subjects of practical importance to the farmer, and we know of no one in modern times, who has done more with his pen, to advance the cause of agriculture, and impart information on this subject to his readers. We advise farmers who can secure these reports to do so, and to study them. In the same number we remarked it was evident that Europe could not feed its population. We meant from the productions of the land; for the nations of Europe have resources, the products of manufactures, mines, etc., with which to purchase the surplus products of the lands of the United States and other countries. All of the old world is starved for food with which

to feed its population, and we are continually seeing notices of the famines which pervade the eastern world. We have recently seen a statement said to be authentic, that six millions of the people of India had perished from starvation in the last five years, and yet India exports wheat to England and other countries. We do not know whether the above statement is true, and we are constantly reminded in reading our journals, of the want of the authority for many things contained in their columns; this is certainly a great omission. Nevertheless, it is true that the people of the old world are annually suffering for want of food, the product of the soil, and that it will be a long time before there can be any surplus in our country with which to feed our own population, and the teeming millions of foreign lands. This should stimulate our farmers to improve their lands and increase their products in every practicable way, without fear of not finding profitable markets.

Agriculture as before remarked has made much progress in recent years by the use of commercial fertilizers, we add now notably, by the utilization of bones and the natural natural phosphates to furnish phosphate lime to our soils, which by constant cropping was being gradually and ruinously deprived of it. Lands were becoming "wheat sick," and "clover sick," and generally impoverished in regard to the production of all crops, and farmers were at a loss to know the cause. A striking instance of this occurred some years since in the Genesee county (of New York). The land became "wheat sick" from constant production of this crop, and the yield fell off from 25 to 30 bushels down to less than one half. Phosphate lime was resorted to, and now the yield has been nearly or quite restored. It has been found that nitrogen may be obtained from the atmosphere, by the growth of clover and peas and other vegetable matter, and by the action of rains in bringing it down to the soil, and that potash is generally in sufficient quantity in clay soils and new lands, but that there is no source for the supply of phosphoric acid (in the form of phosphate lime) but bone, and the natural phosphates. The former alone, would be inadequate in quantity, but an All-Wise and all Providing Providence, has found deposits of it in almost every country of the globe. In our own country are found in South Carolina immense deposits of it, in the manipulation and manufacture of which, millions of dollars are invested, and which yields to the treasury of the State a very handsome royalty. These phosphates, besides being extensively used in this country, are being exported to Europe, because they are less hard, and more available than most of those found in the Old World. We are glad to see that phosphates of good quality have recently been discovered about Tampa Bay, and along Hillsboro River in Florida. We have been hoping to find them in Virginia, and Prof. Campbell of Washington and Lee University, thinks from the geological formations, and their similarity to those of South Carolina they should be found along our Virginia rivers. Several years since, we hoped we had found them in New Kent county, but on close examination, it was proven that they existed only in a pouch of moderate dimensions, in a marl bed. Our last Virginia Legislature chartered a company with full privileges to work our streams and coasts for phosphates, the Company hoping they might hereafter be discovered, but thus far they have not been.

In a recent visit through Tide-Water Virginia, we found much unimproved and badly cultivated land, though capable of being made productive and profitable, and came to the conclusion that this might certainly be accomplished by the use of fine ground S. Carolina phosphates ("floats") and kainit (German potash salts) and peas. These

fertilizers to be used in proportion of two-thirds of the former and one-third the latter, and from 300 to 400 lbs. to the acre, applied when the peas are seeded. Then the peas are to be fallowed under, and wheat or winter oats are to be seeded, with clover last of February or first of March, or as suggested in a former number, the wheat or oats may be seeded right on the peas and a clod-crushing roller be run over them, or a peg roller may be used, as was formerly practiced by Mr. Ed. Ruffin, of Virginia. This roller was made of a heavy log, with blunt wooden pins inserted. The late Dr. St. Julien Ravenel, of Charlestown, S. C. informed me that he had for several years, been using the S. Carolina phosphate and kainit, (which he called his "Ash Element") on the plan above proposed. If a good stand of clover can be obtained, the road is clear for further and permanent improvement, and if by one application of the phosphate and kainit and peas, a good growth of clover is not secured, the same course must be gone over again, with re-application of the fertilizers, and unless the failure was due to dry seasons, or other cause not connected with the fertilizer. On the use of commercial fertilizers, the learned Dr. Voelcker says, "years ago farmers in England used to buy their guanos, and superphosphates without much reference to what chemical analysis would say to them, being influenced in their choice more by general recommendation, and by the price per ton. This tempted the manufacturers to make inferior articles, and sell them at low prices. But farmers have learned that a guano with 13 per cent. of nitrogen is worth more than one with only ten per cent., &c., questions readily solved by the chemist (i. e. the percentages and conditions.) Farmers now give preference to the better qualities, and the result is a competition based upon good quality, rather than low price. And further, by this means, the inferior articles and humbugs that formerly infested our markets are kept away." The same is gradually taking place in our state and country, and if our government appreciated agriculture, as do the governments of Europe, and would establish numerous "Experiment Stations" as done there, and properly sustain our Agricultural Department, we should derive greatly increased benefits in this direction.

I omitted to say when on the subject of the phosphates, that I agree with my friend Dr. Ellzey in the advanced position he has taken in regard to the decided advantage of using the fine ground S. C. phosphates (floats), or fine bone, in place of the dissolved. Cheapness in the relative articles is a great consideration. The sulphuric acid used in the solution displaces nearly one-half of the phosphate lime. And there are other elements which enter into the cost, making the undissolved really cheaper than the dissolved. Let our readers again refer to Dr. Ellzey's article in our number September 1, if they have not clearly read it. They will find that he states that the chemical treatment (dissolved) is more expensive than the mechanical (ground), in the proportion of 130 to 30. If his calculation is correct, it settles the question, and Dr. Ellzey is not the man to make statements without being able to verify them.

MARYLAND BERKSHIRES.—Mr. A. M. Fulford, of Harford county, has made a triumphant tour with his well-known Berkshires through the Western States, winning many prizes at the Bismark Grove, Kansas and Illinois State Fairs, in competition with the most successful breeders in those sections. He has just brought out a new lot, the largest in numbers of any he has yet imported, and including many noted prize-winners in the English shows.

MR. SHOEMAKER'S bull Forget-Me-Not, at the head of the winning herd, took second in his class at the New York State Fair Mr. Corning's being first.

The American Farmer

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Sands, is secretary:

Maryland Horticultural Society.
Maryland Dairymen's Association.
Maryland State Grange, P. of H.
Agricultural Society of Baltimore Co.
Also, of the Maryland Poultry Club,
Thos. W. Hooper, Secretary.

BALTIMORE, OCTOBER 1, 1883.

Mr. Cooper's Sale of Jerseys.

The sale on October 10th and 11th of Mr.
Cooper's importation of Jersey cattle, which
is conspicuously advertised in this issue, can-
not but attract a large attendance, his well-
known judgment in selection and the un-
usual quality and extent of his offerings mak-
ing his sales events of great importance in
Jersey movements. The present lot will em-
brace a large percentage of tested cows and
animals close in blood to those tested, and in-
cluding numerous individuals of marked
beauty and promise. Many of the cows and
heifers in the sale have been bred to the cele-
brated bulls Pedro, Stoke Pogis of Linden
and Black Prince of Linden.

Large Importation of Cattle.

The steamship Nessmore arrived on Sep-
tember 28 from Liverpool, and brought the
largest number of imported cattle ever land-
ed at this port, there being 467 calves, heif-
ers, cows and bulls. With the exception of
eight head the whole was consigned to
Messrs. C. E. Leonard & Brothers, of Cook
and Saline counties, Mo. The cattle are of
the Polled Angus and Galloway breeds, and
have no horns. They all are of black color.
The Polled Angus stock came from the es-
tates of Sir George McPherson Grant, in
Ballindallock and Aberdeen, Scotland, and
the Galloways from Gillespie and Cunning-
ham, Dumfries, in the same country. But
one, a calf, was lost on the passage. The
cattle were landed directly from the steamer
at pier 31 to cattle cars, and at once taken
to the quarantine farm at Patapsco Station,

Baltimore & Ohio Railroad, and they will re-
main ninety days. The Leonard Brothers,
to whom the cattle belong, have stock in
Missouri covering about 5,000 acres of land,
where they make a specialty of breeding
short-horned cattle, Spanish jacks and Meri-
no sheep. They value this importation at
\$200,000. Six heifers are intended for stock
breeders in Minnesota. There are also on
board, imported by Mr. W. H. Whitridge,
two Aberdeen-Angus cows in calf. One of
them is Katinka, No. 4,669 in the herd book
bred to the Jilt bull Justice, 1,463, for which
1,000 guineas has been refused. Katinka
is a very highly bred representative of the
Pride family. The other heifer is Eone, No.
4,675, and one of the most celebrated of the
Erica family. These two cows are represen-
tatives of the most important families of the
Aberdeen-Angus breed.

JAPAN CLOVER.—To several correspon-
dents who have enquired where seed of this
plant may be had, we would say that we
find in the *Southern Live-Stock Journal* an
offer of Walter Stith, of Holly Springs, Miss.,
to furnish it at \$3 per bushel.

MR. VON KAPFF writes us that in the con-
test at the Baltimore County Fair for the
Sweepstakes premium on bulls, awarded to
Mr. Ridgely's King Rex, his bull Normanby
2d did not appear in the ring on account of
sickness.

CORRECTION.—Mr. Massey says he does
not want to grow plants for Brodignagian
gardens, and, in writing of the Coreopsis in
our last, he wished they grew on plants ten or
twelve inches, *not feet*, high.

The Corn Crop—Selecting Seed.

PROF. G. E. MORROW, of the Illinois In-
dustrial University, writes as follows in the
Prairie Farmer—and what he says about
seed corn is applicable to other sections
besides Illinois: the condition of the corn
crop in much of the great corn-growing area
of the country is anything but satisfactory.
At the best there can not be a large yield for
the acreage planted; an early frost would do
almost incalculable damage. Dry weather
has injured the crop over large areas, but has
had the compensating advantage of making
injury from frost less probable. Where there
have been abundant rains, much of the corn
is so little matured that only an unusually
favorable autumn can prevent loss from frost.

It is only too evident that very many farm-
ers did not heed the cautions given last spring,
that, in selecting seed corn, not only its vital-
ity be considered, but also the fitness of the
variety for the region in which it was pro-
posed to be planted. The experience of this
year should impress the lesson that it is rarely
safe to plant, in large quantity, corn grown
far south or north of the place where it is
planted. If taken far south it will probably
require too long a season to mature; if
brought from the north it usually will be a
smaller variety than is desirable. There are
exceptional cases, and often good results come
from persistent efforts to acclimate varieties.
The rule is, however, that good farmers have
varieties better adapted to the section than
can, usually, be obtained from abroad.

I count it very important that these good
varieties be preserved, even if they have only
a neighborhood reputation, and are known
only by the name of some farmer who has
given care to their improvement by the selec-
tion of choice seed. Many such were lost
last year, through failure to select seed. This
year promises to be one in which the selec-
tion of seed in the fall, will be a matter of
exceptional importance. The farmers of
Illinois plant not far from 1,000,000 bushels
of corn each spring. Careful selection of
this quantity of seed in lots of even 100
bushels, is a great undertaking. But select-

ing and saving it in lots of two to ten bushels,
as the average farmer needs, should not be
difficult.

As is well known, there is much differ-
ence in the time of ripening of ears of the
same variety in the same field. An unhealth-
ful early ripening may be caused by disease,
or injury to stalks; but, aside from this, a
difference of ten days, or even two weeks, may
often be noticed in the maturing of ears
grown on the same square rod of ground.
Early maturity is a most desirable quality in
corn, for all latitudes north of Central Illi-
nois. And nothing is more certain than the
selection of early maturing seed will have an
effect on time of ripening of the crop in sub-
sequent years. In attempting to select seed
corn from the cribs in the spring, the time of
ripening can not be determined with any cer-
tainty.

Ears of corn plucked from the stalk and
allowed to dry will give seed of fair vitality,
even when the plucking was done when the
kernels were only hardening. Still better re-
sults come if the stalks be cut and placed
where they can dry without heating as they
may be shocked. By selecting the earliest
ripening ears and securing these without
waiting for full maturity in the field, good
seed may be obtained of late ripening varie-
ties, otherwise desirable.

Placing corn designed for seed in condi-
tions in which it will become thoroughly dry,
without overheating, before hard freezing
comes, is the best security for good seed.
Probably no better plan for doing this has
been found than the old one "tracing up"
the corn by the husks and hanging it ear by
ear in a dry room.

I would not discourage purchasing seed of
varieties that promise well; but hope never
again to see a spring when, as was the case
in 1883, thousands of Illinois farmers will pur-
chase seed corn of which they know nothing
except that "it will grow and looks like pret-
ty good corn."

Home Department.

Worth and Worthlessness of Young Women.

I think I may say without fear of contra-
diction that our young women are not half
as useful in the world as they might be with-
out being a whit less ornamental and also
without curtailing their enjoyment. If we
could imagine for a moment what the result
would be if the grand army of American
girls would for a time do the very best of
which they are capable, we might perhaps
form some just conception of the immense
waste of time and faculty for which they are
responsible. This is more emphatically true
of the young unmarried women, as a class,
than of any other class of either sex. Unless
girls have a "vocation," or are forced to earn
their own livelihood, very few recognize any
claims of home or society at all commensu-
rate with their ability to do. The "few"
prove my first assertion true, and among
these may be found the brightest and most
attractive of their sex.

Girls can accomplish wonders in these
days, but their accomplishments are not of-
ten of the useful order. Of course those
accomplishments help to embellish home and
society, and the girls themselves are the
great conservators of the poetry of life, but
inasmuch as they are our reliance for future
wife and motherhood more practical graces
should be cultivated; youth and beauty are
good, but they are fleeting, and while they
last their value is greatly increased if useful-
ness be added.

The young women who "take things easy"
range all the way from the first emancipa-
tion from school to the mystic point which is
never clearly defined. If they were all shel-
tered under a father's and mother's wing we
might let the question of usefulness rest be-

tween themselves, but there are very many
not so placed. Homes break up and the
girls who escape the actual need for earning
their living, and others who are by a mis-
taken kindness offered homes by the gener-
ous and tender-hearted relatives, often find
themselves members of pleasant households,
where to some extent they partake of the
privileges and pleasures of a home. Others
again are in their father's house but not that
of their own mother,—there is a "step" in
the way, and that "step" often stands be-
tween them and what they would recognize
as their duty, but for the "step."

Whether in the rightful home or a home
which is their's by kindness, or by courtesy,
young women have wonderful opportunities
to make their presence a real blessing; their
freedom from such responsibilities and claims
as naturally rest upon the head of the house
leaves them more free to do such things as
are best appreciated; not being as strictly
confined to the absolute necessities they
may give a grace of finish to most things that
will greatly increase the charm of a home;
they may also, if so willed, render little per-
sonal services to any member of the family
who may need them and which are so grate-
ful if voluntarily and cheerfully given; most
services of this description require very little
effort except of good will and thought for
others rather than self. Not by any means,
that these should be the sum of duties be-
longing to the girls of the house, but these
are their's by right of their exemption from
absorbing care, which as naturally fall to
whomsoever presides over the household.
Such things should rather be their pleasure
than duty. Pleasures are always more real
for having a spice of duty pervading them.
Stern, unmitigated duty demands that the
head and hands of the young women should,
as far as the occasion offers, lighten the bur-
dens of the one who devotes the best of her
entire life toward making the home such as
it may be, and the pleasures of which the
young people enjoy the lion's share.

Somehow it is the common practice for the
mother or the head of the house, whether
mother or not, to assume the harder and
more disagreeable portion of whatever is not
done by servants, until the girls really think
such distribution is altogether proper; in fact
this false position is the keynote to much
that is wrong in the general adjustment of
the relations of all parties to the home du-
ties, because the mother by right of her posi-
tion exercises the chief control; other mem-
bers of the household reckon all they do as
a personal service rendered to her, and it is
not uncommon for girls to defend their own
shirking of duties by saying, "I get no
thanks for what I do," when probably the
very service for which they claimed thanks
fell so far short of their actual duty that
they ought rather to blush for their short-
coming.

Short-sightedness, if nothing worse, must
be the weakness of the times among these
young people. If like the Scripture virgins,
they are only awaiting the coming bride-
groom, they ought to know that this is not
the proper preparation for his coming; that
no man in his senses will choose a girl who
is not valued at home if he knows it. Mothers
are accused of over-zeal to have their daugh-
ters marry; where this is true, may it not
be because the girls do not fill their niche
within the home?

Whatever blame there may be, rests not
entirely with the young women; in fact it be-
longs to society generally and often to the
mothers themselves. Girls have a natural
leaning toward home-making and house-
keeping which their love for play in
that line betrays, and but for perva-
sion in their training and association
this would lead them gradually up to
real duties of a like nature. It might be
dolls and play-work to them to the end
if only their delight in such things was not

disipated by young ladyism, and their womanly instincts made to yield to the demands of schools and society until self-importance becomes the ruling thought and domestic claims are entirely out of order.

It is assumed that because girls take so instinctively to dolls and playhouses, they will as naturally adapt themselves to their duties when they have a real house to keep and a real family to care for. This is a delusion and a snare to many a poor fellow who finds too late that this is a lost art to his wife, whatever other arts she may be master of. Of course, there are exceptions; where a girl has been reared in a methodical household, although she has had no experience in the regulating thereof, yet being used to the comforts of such ruling she will very likely strive to repeat it in her own home, but will necessarily encounter many difficulties which experience would have enabled her to avoid. No girl of ordinary ability and not utterly given to self-indulgence will rest satisfied short of her mother's standard in house-keeping, although she may never reach that of her mother-in-law.

In our unselfish willingness to shield our daughters from hardships which we know are before them, by letting them do just as they choose, we are really making their future all the harder and robbing their present of its highest pleasure, that of learning to live and do for others, which is also the very best preparation for any future which may be theirs.

In whatever station of life young women may find themselves, it best becomes them to do their best toward fitting themselves for every womanly duty thereof. There ought never to be occasion for the head of the house to look beyond the young women under her own roof to take her place if trouble or sickness holds her from filling it herself, and she should always feel sure of help from them when she needs it. The healthy young woman who sits inactive or incompetent in emergencies calling for womanly aid is a sorry spectacle whom nobody admires. CERES.

Concerning Housekeepers.

There is an old saying that poets are born, not made, and we believe the same is true of housekeepers. Some women fit into the position perfectly. They assume the directorship of the household so quietly, and rule it so easily that we quite forget the labor in the results, or perhaps imagine there is no labor at all. We all look on admiringly when we get a glimpse of such a household, or of such a presiding genius, and wonder why we cannot do as well. For we are not all born housekeepers, and to some of us the post brings care, vexation, and weariness of soul and body. But let us console ourselves if we fail, or correct our pride if we succeed, by remembering that to be a perfect housekeeper demands nearly all the known virtues and qualities. One must be wise, dignified, prudent, firm, methodical, skillful and gentle; possessing also tact, courage in emergencies, inventive faculty and teachableness!

There! if that is not enough to make a perfect woman, what more would you have. Yet there are many women among us who are scarcely known outside of their family circle, who have never written a line or painted a picture, who have never been directors of a hospital or managers of a charity, but who are entitled to claim all the just mentioned attributes for their own. And they go on quietly from day to day, never knowing their worth, content with scant praise or none at all, well satisfied if only they can harmonize their cares and duties, and thus avoid friction! These are domestic heroines, whose praises should be sung appropriately. Their less gifted sisters should crown them with garlands, while they sit at their feet and strive to learn something of their ways. And their husbands and children should count themselves especially blessed that the guiding spirits of their homes are so near perfection.—*Christian Intelligencer*.

The Daily Grind of Woman's Work.

The quiet fidelity with which a woman dishwash her life away for her husband and children is a marvel of endurance. Here is the servitude of woman heaviest—no sooner is her work done than it requires to be done again. Men take jobs, work on them, finish them, and they are over for good and all. The prospect of ending them and drawing pay for the labor is alluring, but no such allurements are held out for the wife. She washes Monday after Monday the same garments until there is nothing more of them to wash; then they are replaced by others of new material just like them, and the rubbing and wringing goes on forever. She mends the stockings with tireless fidelity, the same holes meeting her gaze week after week, for if there is a darned place in a sock "he" invariably puts his irrepressible toe through it. Every morning the rooms are put in order, only to be in the wildest disorder by the time night falls. There are no jobs, each one different; there is no pay day. The same socks, the same washing, the same room, every time. There is too little brightness in the lives of women in the country. They have too little help in their domestic occupations. The "nurse" in a house where there is a baby to care for ought to be set down as one of the regular expenses as much as the potatoes for the family. A mother's health both of body and mind is worth more than additional acres of land, or finer live stock. The heart should not be allowed to grow old. Life should not have lost its charm, the heart its spirit, and the body its elasticity at forty years. And yet how many women are faded and wan, and shattered in mind and health, long before they are forty. All the joy of life is not in youth's morning. If we so will it, we can to the last moment of life be at least negatively happy.

When to be Idle.

There are undoubtedly seasons and periods when it is wise to rest; when it is not worth while to commence any undertaking, great or small. There are studies which it is not worth a man's while to take up, pursuits which it is not worth while to follow. For the book that is read at dinner-time or in the street, or a language that is learned in recurring spare moments, is very apt to be half done, except by the occasional few, who really have strength of mind and body sufficient for such achievements. As a usual thing, there is more loss than gain in such a habit, and both conversation and manners suffer when there is a trick of thinking it worth while to pull out some implement of labor, pen, pencil or needle, at times when other people are content to seem unemployed, and are only busy in being agreeable. All such acts come under the same category of virtue with the housewife's economy of time, which made her sit up in bed to knit stockings in the dark, or re-thread her needle at the infinite expense of time and eyesight to save an inch of cotton. Work done in odd moments is never good work if it interferes with meat, mass or rest. It is an evidence of thorough self-mastery when a man knows how to use time, and has the sense to recognize when time is not worth using in any definite way.—*M. A. Barr*.

A FEW weeks ago an unique notice appeared in the Boston papers. A lady advertised to do all kinds of cooking to order. Since then she has been crowded with work, which shows that there is a demand for cooked food which cannot be wholly supplied by bakeries and canning factories. She makes a specialty of white and Graham bread, but also furnishes meats, pies, doughnuts and cakes. Although an educated woman, she is an adept in her art, and if her strength only proves equal to the demand made upon it, she has found a permanent means for securing a livelihood for herself and two young children.

A Pretty Home Toilet.

Husband and children delight in seeing "mother" look neat and nice. Nevertheless, many women dress at home in such a style that they are always ashamed to be seen by anybody but home-folks. If a knock at the front door is heard, they run and hide, or wait till they have "primped up" before opening it. In their creed anything is good enough for home-folks; all nice things—nice clothes, food, dainties—must be saved for company. Any old calico or woolen dress is good enough to do house work in, any old worn-out shoes good enough to wear round the house. As a natural result of this theory, the parlor is always shut up save on great occasions, the sitting room is rarely used, and the family life is entirely in the kitchen. It is no unusual thing for women who hold such theories and carry them out in practice, to find no time to comb their hair till after the dinner work is done, and go round with it in a frowse two-thirds of the day. As a natural consequence, she forfeits much of the respect and admiration which is her due. To antidote this unfortunate result, a pretty and tasteful home toilet will be found very efficient. Calico of fair quality can be purchased at eight cents a yard, and with a clean calico dress on and a nice calico apron the housewife may be always dressed up while at her work. If she unvaryingly combs her hair before engaging in any morning task, her hair will be in order for the day, and a lesson of value will be taught her entire household. A bit of edging in her neck may take the place of a collar, if the collar is too much trouble, and neatly attired in fresh calico and whole shoes she need not run and hide if there comes a knock at the door. The laboring man's wife who is careful of her own appearance while at her work will have a better opportunity for and more influence in persuading her husband to look no worse than he need to while at his work, than she who cares for none of these things. A reasonable attention to externals not only forfeits our own self-respect, but gains the respect of others.

Character and expression may be associated with an interior apartment which shall convey to the minds of guests a sense of mingled appreciation and welcome; or, on the other hand, impart a chilling impression too apt to be abiding, notwithstanding the warmth which attends the congratulations of the host. Rooms should be suggestive of feeling. Light and shade should be studied, as well as the combination and arrangement of drapery, the disposition of furniture and ornaments. Sociability may be expressed even in the placing of chairs and sofas. Two or three chairs, arranged in a conversational attitude in some cheery corner, an ottoman within easy reach of a sofa, a chair facing a stereoscope or convenient to the art album, bespeak sociability. Little studied effect, which shall impress the more than casual observer, may be made with advantage; and to this end it should be regarded, as a rule, to aim to dissipate the ever-prevalent sense of restraint which surrounds the guests, attendant upon his or her first appearance at the house of a friend. In short, homes should be so inviting and cheerful that those who visit them may be joyous and unconstrained, without the slightest feeling of inharmony with the surroundings.

To clean black cloth, dissolve one ounce of bi-carbonate of ammonia in one quart of warm water. With this liquid rub the cloth, using a piece of flannel or black cloth for the purpose. After the application of this solution, clean the cloth well with clean water; dry and iron it on the wrong side, brushing the cloth from time to time in the direction of the fibre.

Eating Fast.

Swedenborg relates that when eating alone one day, he was startled by the Lord appearing in one corner of the room, saying, "Eat slowly!" It seems sometimes as if it would be a good thing if an inhabitant of another sphere should appear at our tables, and repeat this command. Dyspeptic men and women and unhealthy children, with weak stomachs, are not uncommonly seen, and in many cases stomach-troubles can be traced directly to the practice of bolting down food in silent haste. I have sat at tables, where, if I had not known to the contrary, I should have thought the whole family were about to start for the cars, and were anxious lest they be left. Looked at from the side of health alone, this practice is bad enough; but the entire lack of grace which characterizes meals conducted in such a hurry adds a great deal to the evil effect. It takes from the good manners, and from the possible culture of the family, in a way that they cannot possibly afford. The old adage, "The less haste the more speed," would be a good motto to hang over the sideboard—providing that anyone ever reads a motto. There is no habit much harder to overcome than that of eating slowly. Once formed, it is a defence against indigestion. Children can be encouraged to cultivate this habit, and the necessity for it can be impressed upon their minds, when in the unresisting state which follows overloading the stomach.—*Home Theme*.

THERE never was a time when ribbons were so handsome and so cheap and so much used for decoration. Almost the last use to which an old-time housekeeper would think of putting a ribbon would be to tie it around the tall and suspicious-looking bottles on the sideboard, and this thing is done at the present time, unblushingly, and receives the sanction of those gentlemen who "do" the decorations for some fashionable and popular art stores; and, since it is the fashion, a yellow satin ribbon, tied in a graceful way, with loops and ends of the same length, around the neck of a crimson peacock blue bottle, does look very pretty. Tall vases that are not highly colored are ornamented in the same way.

Domestic Recipes.

CANNING SWEET CORN.—The "Oneida Community" preserves sweet corn by cutting the raw corn into tin cans; then fill with cold water even with the top of the corn; solder up the can, pricking a small hole in the cover; solder that also. Boil the cans and contents in boiling water two and a half hours; then with a hot iron open the small hole and let the gas blow out, after which solder up and boil again two and a half hours and set away for use. Peas, string beans and Lima beans can be put up in the same manner, and they certainly pay for the trouble of putting them up. Every family should have a soldering apparatus, as it would pay for itself in a short time, and save many trips to the tinner.

CUT out this recipe for grape catsup, and try it when your grapes ripen. Any variety will make the catsup, and it will be nice, but the Catawba or tart grape is preferred to the Concord or Delaware: Let five pints of grapes simmer till they are so soft that you can rub all but the seeds through a colander with ease. After this is done, add two pints of brown sugar, one pint of vinegar, two tablespoonsful each of all-spice, cloves and cinnamon, one teaspoonful and a half of mace, one of salt, and half a teaspoonful of red pepper. Put them all in a porcelain kettle, let them boil slowly till they are as thick as you like catsup to be. The grapes must first be picked from the stems, and be washed thoroughly, or they will be gritty, and the catsup be spoiled.

An Excellent Medicine, the best I ever used. It goes right to the spot, and a single dose makes a new man of you. This is only a sample of some of the strong expressions used by persons who have tried J. M. Laroque's Anti-Bilious Bitters for Dyspepsia, Headache, Constipation and Disease of the Liver and Stomach. 25 cts. a paper; \$1 a bottle. W. E. Thornton, Baltimore and Harrison streets.

Misery is a mild word to describe the mischief to body and mind caused by habitual constipation. The regular use of Ayer's Cathartic Pills, in mild doses, will restore the torpid viscera to healthy activity. Try them and be cured.

All agree that handsome hair is one of beauty's indispensable elements. Ayer's Hair Vigor maintains it in freshness, brightness and luxuriance.

DURHAM, Iowa, March 2, 1882.
Ayer's Sarsaparilla has cured me of the inflammatory Rheumatism, after being troubled with the disease for eight years.
W. M. MOORE.

Baltimore Markets—Oct. 2.

Live Stock—Beef Cattle. Cattle were held rather more firmly than last week, there being a considerable decrease in the offerings. Their average quality was better, though the tops were perhaps not as good as those of last week. We quote: Very best on sale to-day, 5½@5¾ cts.; That generally rated first quality, 4½@5 cts.; Medium or good fair quality, 3½@4½ cts.; Ordinary thin Steers, Oxen and Cows, 3@3½ cts.; Extreme range of prices, 3@5½ cts.; Most sales were from 3½@5½ cts.

Swine.—There is a considerable increase in the number of receipts over the previous week; but there does not seem to be more than equal to a fair demand at prices fully equal to those ruling last week. We quote rough sows and stags at 6½@7 cts., and the better grades at 7@7½ cts., and extra, 7½ cts., with a full number at the latter figure.

Sheep and Lambs.—Trade is quite slow, the demand on the part of outsiders being light and the butchers buying sparingly. We quote butcher Sheep at 3½@5 cts.; Lamba, 4@6 cts.; Stock Sheep at 3@3½ cts. per head, and Wethers, 4@4½ cts. per lb.

Tobacco.—Leaf.—There is a brisk demand for Maryland for all grades at full prices. Common grades also find buyers more freely than heretofore. We quote: Maryland inferior and frosted, \$1.50@2.50, do. sound common, \$2.00@2.40; do. good common, \$2.50@3.00; do. Middling, \$3.00@3.50; do. good fine, \$3.50@4.00; do. fancy, \$4.00@4.50; upper country, \$4.50@5.00; do. ground leaf, \$3.00@3.50. For Ohio we note sales of about 310 hhds., at full prices, for export and home consumption. We quote inferior to good common, \$4@6; greenish and brown, \$5@7.50; medium to fine red \$7.50@10; common to medium spangled \$7@10; fine spangled and yellow \$11@16; air-cured common \$4@6; air-cured medium fine \$7@15.

Flour.—Only a moderate inquiry is reported from local jobbers, and the market is quiet but steady. We quote as follows: Howard street and Western Super, \$3.35@3.75; do. Extra, \$3.75@4.75; do. Family, \$5.00@6.00; City Mills Super, \$3.00@3.75; do. Extra, \$4.00@4.75; do. (Rio Brands) Extra, \$3.75@6.00; Baltimore Winter Wheat Patent, \$7.00; do. High Grade Family, \$6.50; do. Second Grade Extra, \$6.25; do. Third do. do., \$6.00; Fine, \$2.75@2.90; Rye Flour, \$3.75@4.00; Corn Meal, per 100 lbs., \$1.30@1.35.

Wheat.—The market for Southern Wheat is firm with a fair demand for choice samples. Good to choice samples range from \$1.08 to 1.12 for Fultz and \$1.10@1.15 for longberry. Common to tough parcels sell at 90 to 1.06. Western Wheat ruled inactive and lower, closing quiet and easy. The closing quotations were as follows: Spot No. 2, \$1.07@1.08; October, 1.08@1.09; November, \$1.10@1.10½; and December, \$1.13@1.13½.

Corn.—There is a good demand for Southern Corn and the market is firm, with light offering. Good to prime white sold at 66@68 cts. and warm yellow at 66 cts. Nothing is doing in Western Corn and the market is dull and entirely nominal. The closing prices were: 50½@50¾ cts. for spot, 50¾ cts. for October, 50¾@60¾ cts. for November and 55½@56 cts. for year.

Oats.—There is a liberal offering, but holders are disposed to force business, and the market is quiet and steady, with only a moderate demand. We quote Maryland and Pennsylvania at 30@41 cts.; mixed Western, 28@36½ cts.; white do., 37@39 cts.

Rye.—There is a fair inquiry and the market is firm though quiet. Sales 450 bushels good Pennsylvania and Maryland at 63 cents.

Cotton.—The demand is slow and uncertain, and the market is dull and rather easy, though holders show no disposition to allow concessions, and no fresh business is reported. We quote as follows: Middling at 10½@10¾ cts.; low middling at 10 cts., and good ordinary at 9½ cts.

Provisions.—The general situation is quiet but firm. A fair local order trade is doing at unchanged prices. Packed lots from store are quoted as follows: Bulk shoulder 7½ cts.; clear-rib sides, 7½ cts. Bacon shoulders, 7½ cts.; clear-rib sides, 8½ cts. Hams—Sugar-cured, 15½@16½ cts. Refined Lard, in tierces, 10 cts. Mess Pork—New heavy, \$13.50@14 bbl.

Butter.—Trading is restricted by the scarcity of choice table grades, and the market is quiet but firm. Medium and inferior stock is neglected. We quote choice New York State at 22@25 cts.; fresh Western choice at 18@20 cts.; do. good to prime at 14@16 cts., and near-by receipts at 10@20 cts. V B.

Eggs.—Fresh lots arrive slowly, and the market is firm and higher under a brisk demand at 25@26 cts. per dozen, the latter for fancy near-by.

FARMERS

who are interested in
Growing Crops

cheaply and successfully
should write us for our pamphlet on pure
fertilizers. A good fertilizer can be made
at home for about \$12 a ton by composting
with POWELL'S PREPARED CHEMICALS.
References in Every State. Agents wanted
for unoccupied territory. Apply with references.

BROWN CHEMICAL CO.

Manufacturers of
Powell's Tip-Top Bone Fertilizer,
Bone, Potash, Ammonia, &c.
16 LIGHT STREET, BALTIMORE, MD.

MARYLAND STATE AGRICULTURAL ASSOCIATION.

ANNUAL EXHIBITION 1883,

OCT. 30, 31, NOV. 1, 2,

PIMLICO COURSE, NEAR BALTIMORE.

Entries in Implement and Miscellaneous Department close OCT. 1, 1883. Entries for Trials of Speed, OCT. 13. Entries for Live Stock, OCT. 30. For Premium Lists apply to

J. D. FERGUSON, Secretary.

58 North Charles street, Baltimore, Md.

FOR FALL PLANTING Fruit & Ornamental TREES. SHRUBS, ROSES, &c.

The largest and most complete general stock in the U. S., including many Choice Novelties. Bridged Catalogue mailed Free to all applicants. Address,

ELLWANGER & BARRY Mount Hope Nurseries

Rochester, N. Y.

SOUTH DOWNS

Yearling and 2 Year Rams.

ASO 20 Breeding Ewes from the Best Strains of Henry Webb and Lord Washington for Sale by

SAM. J. SHARPLESS,

705 Walnut St., Philadelphia.

WM. L. BRADBURY,
NASON, ORANGE COUNTY, VA.

High Class Reg. Jersey Bulls.

Duroc or Jersey Red and Small White Yorkshires.

Hampshire-Downs, Cotswolds and Merinos.

Houdans, Light Brahmas, Plymouth Rocks.

My imported Hampshire-Downs combine early maturity with large carcasses, are very hardy and prolific; best of nurses, good cheerers of a fine medium staple wool, that is always in demand. Hampshire bucks crossed on common ewes give size with early maturity to the lambs.

IMPROVED WINTER OATS.

Very choice thoroughly cleaned seed, of a variety I have been growing and improving for eight years. They are rust proof, very hardy and prolific, weigh 33 to 40 lbs. to the bushel, yield enormously. \$1.50 per bushel of 32 lbs., \$12.00 for 10 bushels, \$1.00 for 8 lbs. by mail, 30 cts. for sample by mail.

GRAPE VINES

Also other Small Fruits and all other varieties of Grapes. Extra quality. Warranted true. Out by mail. Low Rates to Dealers.

POCKLINGTON, DUCHESSE, LADY WASHINGTON, VERGENNES, MOORE'S EARLY JEFFERSON, EARLY VICTOR, BRIGHTON,

PRENTISS

LARGEST STOCK in AMERICA. Prices reduced. Tillis Catalogue, T. S. HUBBARD, Fredonia, N. Y.

PETER C. KELLOGG & CO. have received instructions from Mr. T. S. Cooper to announce his

FALL SALE OF IMPORTED JERSEY CATTLE,

PER STEAMER "MABENGO,"

October 10th and 11th, 1883,

Commencing each day at 10 o'clock A. M., at the RAILROAD STABLES, 64th Street, east of 2d Avenue, NEW YORK (Office 107 John Street).

The Offerings, with expected increase, will, by the day of sale, include about 140 HEAD, being the entire importation, with exception of a few calves and a number of old cows, expressly selected for the LINDEN GROVE HERD.

The CATALOGUE will be ready about October 1st, 1883, for which please send postal card to T. S. COOPER, Linden Grove, Coopersburg, Pa.

The following brief summary will give an idea of a part of its contents:

BULLS.

HAPPY CICEBO and PRINCE, both yearlings, by Cicebo, whose dams are well-bred and superb dairy cows.

COWS AND HEIFERS.

ARAGOSSA—Second prize over the Island in 1883 in the aged cow class. Test, 15 lbs. 3 oz. butter in 7 days—an inherited quality, as her sire, Cour de Lion, P. 140, C. is a son of Rex, the sire of Mr. Meachert's Sultan, rate 23 lbs. 8 oz. in 7 days, and Rex was a son of the famous Regina.

HEIFER CALF by Cicebo, dam Saragossa.

PRINCESS GEORGIANA, by Sir George—First Prize (scoring 92 points) over the Island in the Heifer class, 1883; also First Prize and Challenge Cup at St. Martin's and Trinity Show, 1883.

NONPAREIL, 8 years, by Stockwell 2d, P. 24, H. C., out of the dam of Nancy Lee.

ELDORADO, 3 years, by Pilot, son of Khedive, and sire of Khedive's Primrose, \$6,150; Oxford Kate, \$3,550; Pilot's Rose, \$2,400; Pilot's Veronica, \$1,010; Rainbow, \$950, &c.

CATY, 5 years, a magnificent daughter of Vertumnus out of a half sister of Fancy Fan.

ENERGY, 7 years, with a test of 14 lbs. 3 oz. butter in 7 days, a daughter of Duke 76.

AUGEREE GEM, 6 years—Test, 15 lbs. 3 oz. butter in 7 days. Foundation stock.

HIGHFIELD LASS, 3 years—Test, 14 lbs. 1 oz. butter in 7 days (by Royal Saturday, son of Brown).

The list also contains representatives of all the most popular sires of the last years, such as—

HAPPY 309—Son of last year's champion and sire of this year's champion cow—Three daughters.

CHATEWAYO—Five daughters, showing superb udder developments.

KING—(son of Young Prince)—Ten daughters, very promising.

BOBBY—(four of whose daughters averaged \$2,231 in the last May Sale)—Four daughters, exceedingly fine, will be bred to Pedro.

SIR GEORGE—Four daughters, all good.

CICEBO—Ten daughters, likewise superior.

There are also some very choice young things by Count St. George, Lemon Peel, Perrot, Silver, Orange Peel and Golden Cloud, and older ones by Lord Beaconsfield, Farmer's Glory, Rollo, Dido, Badier Boy, Le Brocq's Prize, Nero, &c.

ADDITIONAL ANIMALS.

Since this advertisement was issued in its original form, Mr. COOPER has decided to add to the Sale Catalogue the following list of VERY VALUABLE ANIMALS. The reason of this addition is the fact that he unfortunately lost on the voyage three superb animals of his late importation, intended for the Sale, and it is only his determination to maintain to the utmost the high quality that has always characterized his Sale offerings, that now induces him to more than replace the loss with animals of greater value, that were intended to remain permanent fixtures in the Linden Grove Herd. These are:

LADY OF KASSASSIN, 4 years, a double granddaughter of Khedive, son of Coomassie. This cow will be remembered as one of the choicest offerings at the May Sale, where, after very spirited bidding, she was sold for \$2,350, and, as published at the time, was re-purchased by Mr. Cooper, before the termination of the sale, at a liberal advance. Many disinterested breeders regard her as the best in-bred Coomassie cow that has been imported. Como Lass, similarly bred, purchased by Mr. Cooper last spring, won First Prize over the Island at the Spring Show, and advises just to hand report that she has again been awarded First Prize over the Island at the Jubilee Show.

BLISS, 2 years—a grand little cow, whose good qualities will speak for themselves—by Pedro, out of a double Fanny-Alpha-Edith cow, together with her solid-colored Bull Calf GOLD PLATE, by the in-bred Coomassie-Carlo bull of Mountinside.

THE SERVICE BULLS

to which the Cows and Heifers are mainly in calf are Pedro, son of Euros (6 to 8 head); Black Prince of Linden, who is by Black Prince of Hanover (son of Rotor 2d) out of Marjoram 2d, that tested 15 lbs. butter in 7 days when 3 years old, and is full sister to Stoke Pogs 3d, that sired Mr. Fuller's Mary Anne of St. Lamberts, whose official record is 24 lbs. 13 oz. in 7 days, during the last half of which she gave at the rate of 26 lbs. 8 oz. per week; also nine others whose combined tests for one week show an average of 15 lbs. 2 oz. (his breeding thus unites the two great branches of the Rotor family); Stoke Pogs of Linden, son of imported Stoke Pogs, a pure Dansey bull, and out of imported Mistide, likewise of Dansey blood, and with her dam Mattie credited with a test of 17 lbs. of butter per week each; Sir George, son of Guy Fawkes, and the favorite Island Bulls Lemon Peel and Perrot, of Coomassie-Young Rose Blood.

A special effort has been made by Mr. Cooper to have his importation include as large a percentage of tested cows, and others as close in blood to cows that have been reliably tested, as possible. In this respect it has, perhaps, never been excelled by any entire importation of considerable numbers. Referring to the quality of his past importations, and to the satisfaction which we know the cattle imported by him have generally given to purchasers, we doubt not that buyers will accept his assurance that, as heretofore, his Sale will afford an unusual opportunity to select from large numbers of the VERY BEST FEMALES THE ISLAND AFFORDS, got by and in calf by bulls of the highest caste.

From our personal inspection of the Herd, accompanied by experienced and successful judges, we are confident that its appearance fully sustains these claims.

PETER C. KELLOGG & CO., 107 John St., New York.

ESTABLISHED 1826.

SUMMER CLOTHING

FOR MEN, YOUTHS AND BOYS.

LARGEST VARIETY IN THE CITY OF GENUINE AND IMITATION CHEVIOTINE ALPACA, NUNS' CLOTH, DRAP D'ETE, AND SERGE SUITS LINEN MONAIE AND GLASCE DUSTERS.

OUR CUSTOM DEPARTMENT

Is Complete in its Assortment of Piece Goods from which to order. Styles and Prices to suit all Tastes. All Goods properly shrunk before being made up. Samples and Prices sent free upon application. Ten per cent. discount allowed to all Clergymen.

NOAH WALKER & CO.

165 and 167 WEST BALTIMORE STREET,

BALTIMORE, MD.

WE NOW OFFER FOR SALE

PURE No. 1 PERUVIAN GUANO,

Containing about 6 per cent. of AMMONIA and 45 per cent. BONE PHOSPHATE OF LIME.

The Guano has not been ground or in any manner manipulated. If farmers will compare the above ingredients with the apparently cheaper fertilizers offered for sale, we think they will pronounce Peruvian Guano the cheapest fertilizer (in the strict sense of the word) in the market. It being a natural guano, the cost of manipulation borne by manufactured fertilizers is saved. Many planters are tempted by the price of Acid Phosphates, but lose sight of the fact that a large proportion of the 2000 lbs is acid, they therefore not obtaining a full ton of Bone Phosphate. Peruvian Guano is naturally in a form for the seed to at once derive nourishment from.

VOSS BROTHERS,

50 S. GAY STREET, BALTIMORE, MD.

29 PERCHERONS,

Just landed, and others coming, holding numerous Gold and Silver Medals recently won in France. Send for Catalogue

A. ROGY,

332 Palisade Ave., Jersey City, N. J.

PRATT'S ASTRAL OIL

WILL NOT EXPLODE.

Wholesale and Retail.

LAMP OF EVERY DESCRIPTION.

For Sale by W. & H. SPILCKER,

Agents for Ches. Pratt & Co., } 163 Baltimore St.
New York.**YOUNG MEN.**

Now is the time to learn TELEGRAPHY. Written guarantees given to furnish paying situations. For terms, address, COMMERCIAL & E. E. TELEGRAPH OFFICE, Ann Arbor, Mich.

GUNS

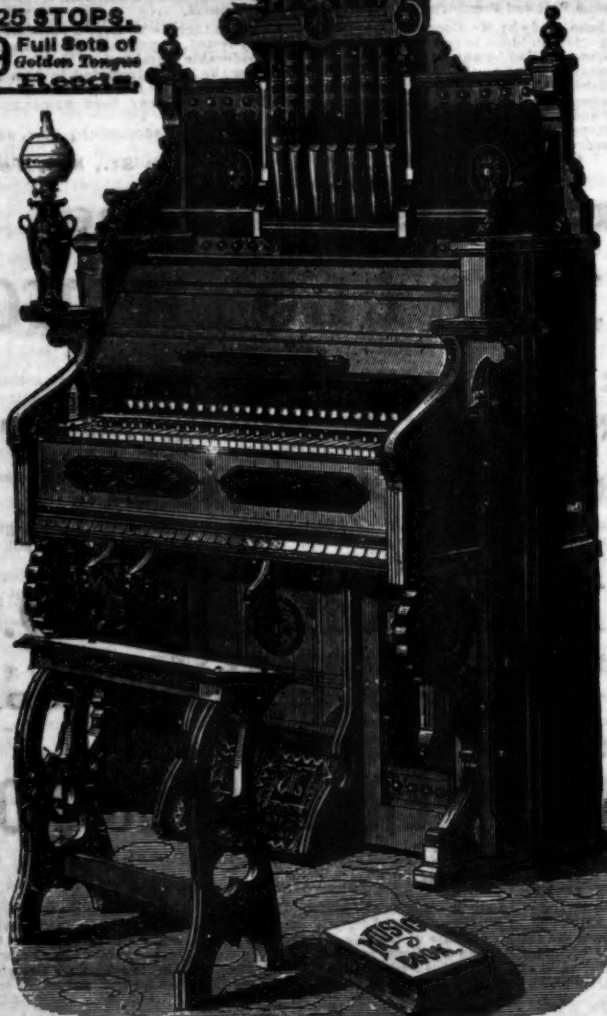
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WARRANTED 6 YEARS.
\$115 for only \$49.75

25 STOPS.
9 Full Sets of Golden Tongue Reeds.



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Manufacture and have constantly in stock the following Popular Brands of

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THE ACTIVE AMMONIATED BONE,
THE MODEL AMMONIATED BONE,
THE FAVORITE AMMONIATED
SUPER PHOSPHATE,
THE POPPLEIN SILICATED PHOSPHATE,
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Goods Compounded according to any special Formula desired on short Notice.

All Goods Guaranteed.

OFFICE: 128 W. Baltimore Street,
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Factory at Canton, Baltimore County.

PIPE ORGANS [25 STOPS] ONLY \$49.75

INCLUDING BENCH, BOOK AND MUSIC, provided you order within thirteen (13) days from date of this newspaper, or if you order within five days, further reduction of four dollars (\$4) will be allowed. I desire this FRANK UPRIGHT PIPE ORGANO ORGAN introduced WITHOUT DELAY, hence this GREAT REDUCTION.

REGULAR PRICE, \$115.00

ment, or if you are unable to buy now, write your reasons why. Remember, this offer cannot be continued after the limited time has expired, as the AUTUMN and WINTER MONTHS are fast approaching, when I sell thousands at the regular price for Holiday Freebie Organs. Read the following brief description and let me hear from you anyway, whether you buy or not:-

25 USEFUL STOPS AS FOLLOWS:

1-Vox Celeste.-The sweet, pure, excited tones produced from this Stop are beyond description.
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1883.

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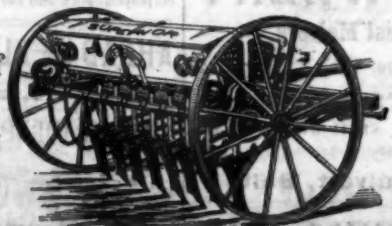
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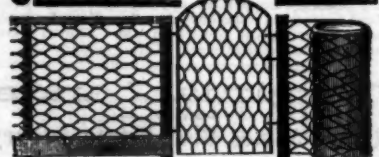
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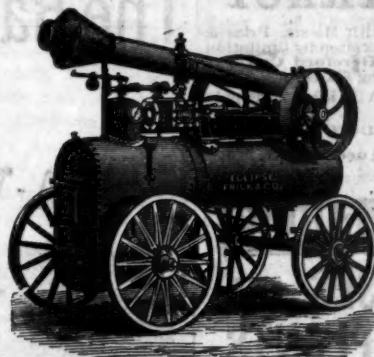
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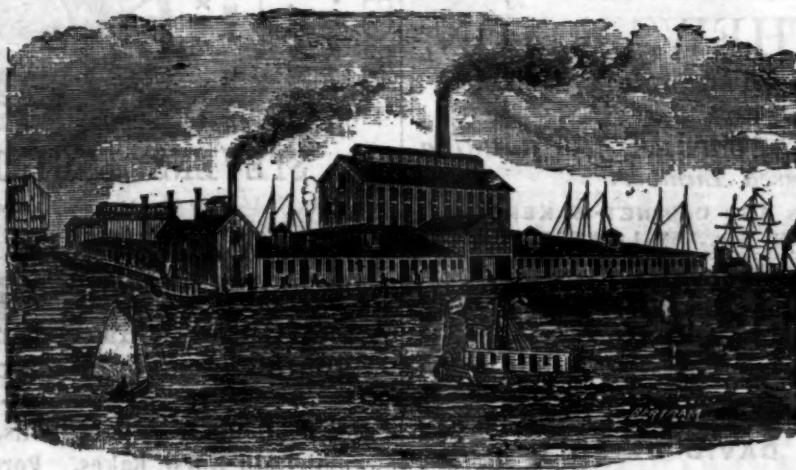
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